

INSIDE DOPE

by GEORGE F. TAUBENECK

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Add Sport Stories
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Stories of the Week

The oldsters who didn't care whether they lived another month or not were discussing the most satisfactory way in which they might end their on-a-bound lives.

"I'd prefer to be killed in a fast train collision," avowed Mike Methuselah.

"Would be better to bow out in an airplane crash," his 85-year-old companion declared.

"What do you think, Zeke?" the first octogenarian asked, turning to the third ancient gentleman in the party.

Without hesitation, 95-year-old Zeke replied:

"My ambition is to be killed by a beautiful blonde's jealous third husband."

Let's Get This Straight

Percival was trying to convince the Dean that he didn't need to take the college entrance exam, because he had been an all-A high school student.

"Ahh, yes," pursued the Dean, "and where did you matriculate?"

"Sir," ejaculated Percival, "I've gone to the movies, and smoked now and then, but I've never matriculated yet!"

Via Western Union

Like too many superoptimistic business enterprises after World War II, a certain young corporation got too big for its britches. Reaching out for a big helping of all that easy money which seemed to be floating around, it overexpanded, bought too much equipment, overloaded on inventories, hired too many hotshots, and finally wound up in bankruptcy court.

At that time, the president was in Florida—spending his future expectations of profit. His siesta was interrupted by a telegram from the treasurer:

"Cash all gone. Creditors pressing. All is lost."

After dictating this mournful telegram, the stay-at-home partner put on his hat and coat.

"Don't read it back to me," he ordered his secretary. "I can't stand to hear it again."

Don't Identify Yourself

The president of a small business enterprise summoned an employee into his office. He put this young fellow "on the carpet," as the saying goes. For one reason and another, this youngster hadn't done his job too well.

The employee, in a gesture of self-defense, began to criticize the way in which the corporation was managed. After listening to three minutes of helter-skelter criticism, Boss lost his temper.

"Young man," he roared, "who do you think you are? Do you want to be president of this organization?"

"Why no," meekly responded the critical employee.

"Well, then," the corporation executive went on, as he pounded the desk, "stop talking like an ignorant fool!"

It Happened in Georgia

Old friend Bob Nixon once told us about the time that, when he was connected with a bank in Georgia, a teller absconded with some of the funds.

The bonding firm sent a detective down to the scene of the crime, and the following conversation ensued between them.

ISSUED EVERY MONDAY AT 450 W. FORT ST., DETROIT 26, MICHIGAN. ESTABLISHED 1926.



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Detroit Crackdown On 'Bait' Ads Gets Tangible Results

DETROIT—An intensive crackdown by the local Better Business Bureau against false advertising of television sets and rebuilt vacuum cleaners and sewing machines has resulted to date in a vacuum cleaner concern being fined and two other companies agreeing to discontinue allegedly deceptive advertising, bureau officials reported.

City Sewing Center, Inc. here was found guilty of false advertising and fined \$100 by Recorder's Judge Paul E. Krause last week. The judge dismissed a similar charge against Morris Kahlon, resident agent.

Complainant in the case was a shopper for the Detroit BBB. The shopper said she purchased a \$16.95 vacuum cleaner advertised in local newspapers as "completely rebuilt." A vacuum cleaner expert testified that the cleaner actually had several old, worn, and broken parts, was very dirty, and was not completely rebuilt.

The other companies which have agreed to stop what the BBB called "deceptive" advertising are the House of Television, operator of six branches in the metropolitan Detroit area, and National Vacuum Co., according to S. B. Kempton, assistant manager of the local bureau.

Kempton said that after warnings by the bureau, the House of Television discontinued its "Mystery Melody" radio contest which the BBB blasted as "phony, deceptive, and fraudulent." The TV chain also agreed not to run "inaccurate" newspaper advertisements such as one published recently which offered a 17-in. television set at \$89.95 with "no extra charges," Kempton stated.

As a result of action by the BBB, Kempton said, both City Sewing Center and House of Television recently ran in local newspapers "corrections" of previously-published advertisements. The City Sewing Center ad said:

"We recently advertised 'Completely Rebuilt Electrolux Vacuum Cleaner complete with new attachments—only \$16.95.'"

"Our attention has been called to (Concluded on Page 27, Column 3)

Coleman To Offer 2, 3-Ton Cooling Units for Use With 'Blend-Air' Systems

WICHITA, Kan.—The Coleman Co., Inc., manufacturer of gas and oil-fired home heating equipment, has recently released additional information on its plans for limited production in 1952 of a new summer cooling unit for use with its "Blend-Air" heating and ventilating system.

The new unit, to be offered in 2-ton and 3-ton sizes, was developed for use with Blend-Air to provide year-round indoor climate control for homes and small commercial buildings.

The simplicity of the unit, the absence of special ductwork since the heating and cooling units use the same distribution system, and its operating efficiency, insure a low first (Concluded on Back Page, Column 1)

Crosley Lists Prices for New Air Conditioner Line

CINCINNATI—Suggested list prices were announced by Crosley Div., Avco Mfg. Corp., for its new line of room air conditioners.

The prices are: ½-hp. unit, \$229.95; ¾-hp., \$329.95; 1-hp., \$399.95. The units will be ready for retail delivery this spring, Crosley said.

Next Educational Conclave In May At Philadelphia

WASHINGTON, D. C.—The 9th Refrigeration and Air Conditioning Educational Conference (first in the new series to be held in the interim period to the time of the 1953 All-Industry Show) will be held May 2, 3, and 4 in Exhibition Hall of Convention Hall in Philadelphia. It has been announced by Refrigeration Equipment Manufacturers Association.

Program details for the Philadelphia conference will be announced in the near future. Companies which exhibited at the 7th All-Industry Refrigeration & Air Conditioning Exposition at Chicago last November will be offered free exhibit space at the educational conferences.

While final dates and places have not been set for the other two educational conferences to be held prior to the 1953 All-Industry Show, it is fairly certain that one of the conferences will be held in Miami in November or December, 1952. The other one will be held at some place on the west coast, probably in April of 1953.

Says Air Conditioning Was 'Billion-Dollar' Industry Last Year

NEW YORK CITY—The air conditioning industry assumed the proportions of a billion-dollar business in 1951, it was stated by Cloud Wampler, president of Carrier Corp., at the company's recent annual meeting here.

Wampler said that manufacturers sold \$440 million worth of air conditioning equipment last year, and that the public paid "close to a billion" for the industry's products, and accessory equipment, as well as installation.

Carrier Corp. is celebrating 1952 as the 50th anniversary of the air conditioning industry, marking as the start of the industry Willis Carrier's design of an installation in 1902 for a Brooklyn lithographing plant.

Noting that the industry took 50 years to reach the billion-dollar status, he predicted that the next half century will see the industry increase at least fivefold over current levels.

While foreseeing that "government curbs and material shortages" would have an impact on the industry in 1952, Wampler said that he expected Carrier's volume to be as good and possibly better than that of the last fiscal year, when it approached a record of \$81 million. He said that with the increasing volume, the company needs "additional working capital, we could use \$25 million tomorrow to do the job."

January Ice Cream Output Rises 11% over Last Year

NEW YORK CITY—Ice cream production in the United States reached 37,915,000 gals. during January, the highest level for the month since 1946, the Wall Street Journal reported recently.

This figure represented an 11% gain over January, 1951 and was 12% above the 1946-50 average for the month. Production was up 18% over December as compared with 14% in the same period last year and 5% for the five-year average for the period.

Architects To Hear Contractors' Case For Recognition

NEW YORK CITY—The Refrigeration & Air Conditioning Contractors Association, Inc., which is seeking to have the industry's contractors recognized as separate bidders, will be given an opportunity to present its case before the nation's architects.

This was indicated at conferences between Nate Edelstein, executive vice president of RACCA, and two officials of the American Institute of Architects (AIA). They are Ralph Walker, past president, and Walter Taylor, a director of education and research.

RACCA is conducting a campaign to erase the "erroneous belief" of "too many" professional architects and mechanical engineers that refrigeration and air conditioning is a subcontracting job.

The association launched the drive by sending letters to the AIA and the American Society of Mechanical Engineers asking that these groups revise their codes of bidding procedure so that refrigeration and air conditioning in all its phases might be handled as a completely separate item in invitation to bids.

As the result of Edelstein's conference with Taylor, the latter agreed to allow RACCA to submit a treatise (Concluded on Back Page, Column 3)

House Group Okays Fair Trade Bill But Chances Seem Slim

WASHINGTON, D. C.—The McQuire bill which would put teeth back into state "fair trade laws" has been passed by the full House Interstate and Foreign Commerce Committee.

However, the betting in political circles here is against the chances of any bill that would put fair trade pricing into effective operation. Opposition of consumer, farmer, and labor groups is said to stand in the way of any such action, particularly in an election year. However, fair trade boosters have some vociferous and energetic supporters in Congress and its supporters do not view the cause as hopeless.

State fair trade laws permit a manufacturer to make an agreement with retailers on minimum resale prices. One main part of many of these state laws is a so-called non-signer clause, which binds all sellers in a state to observe the minimum prices fixed in an agreement between a manufacturer and any one seller.

But a Supreme Court decision last year outlawed the non-signer clause, and fair trade advocates said that the decision destroyed the effectiveness (Concluded on Back Page, Column 2)

Victor '52 Freezers Add New Features

HAGERSTOWN, Md.—Marked by an all-out array of convenience features, the new line of Victor Products Corp. "Quickfreezers" line of home and farm freezers is now on the assembly lines, reports J. K. Noel, Jr., vice president in charge of sales.

Models in the 1952 line are in 8, 10, 14, 19, and 21½-cu. ft. sizes.

Separate freezing compartment, blue and gold plastic grille easily removed for cleaning the condenser; (Concluded on Back Page, Column 5)

4 'Frost Free' Models Offered By Westinghouse

'52 Refrigerator Line Adds New Sizes Equipped with Automatic Defrosting

MANSFIELD, Ohio—Four "Frost Free" automatic defrosting refrigerator models spearhead the 1952 line of Westinghouse electric refrigerators and ranges which will be previewed this week by dealers at a series of 123 meetings throughout the country.

The new line of products which includes a low cost 7.5-cu. ft. "Frost Free" refrigerator, and extension of deluxe electric range features to medium and low cost models, will be available nationally within the next month, states T. J. Newcomb, Westinghouse Appliance Div. sales manager.

Both ranges and refrigerators have been restyled and the refrigerators will feature a new inner door storage arrangement for maximum storage use of this door space. The Super Speed Corox unit that gets red hot in 30 seconds will be used for the first time on the Westinghouse medium priced range.

Suggested prices on the new models range from \$449.95 for the 10½-cu. ft. (DFD-104) Frost Free to \$319.95 for the 7½-cu. ft. Frost Free (DFD-75) and \$379.95 for the 11-cu. ft. (DD-11) refrigerator-freezer model to \$274.95 for the 8-cu. ft. (DD-8) model; electric range prices run from \$439.95 for the double-oven Commander to \$193.60 for the Rancho.

In addition to the Frost Free refrigerators, four other models were introduced including a new 11-cu. ft. refrigerator-freezer with full-width freeze chest, reports G. H. Meilinger, manager of the company's household refrigeration department.

The line features new exterior and interior styling, larger interior capacity and redesigned Egg Keepers and shelves in the door.

A chrome-finished three-way door handle set at a 30° angle and bright metal trim keynote the exterior styling of the new refrigerators. Deluxe models feature a smart door-width band of chrome behind the handle (Concluded on Page 4, Column 2)

Construction Rules Eased On Commercial Projects

WASHINGTON, D. C.—National Production Authority has announced that it will permit most types of commercial construction that are at least 1% physically complete to get allotments of controlled materials for completion of the project.

Some allotments may even be granted during the second quarter, agency officials said. Up to now, such construction had to be at least 20% complete before allotments would be granted.

The more stringent controls are still in effect for entertainment projects such as theaters and bowling alleys, however, NPA said.

As an example of what NPA meant by 1% physically complete, one official said, "If footings are placed in an excavation, a project will get an allotment. But no allotment will be made if the builder has only dug a hole in the ground."

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NARDA Asks FTC Action On 'Fix-It-Yourself' Books

CHICAGO—The National Appliance & Radio Dealers Association has asked the Federal Trade Commission and Underwriters' Laboratories to take action with respect to a newspaper advertisement which advised readers they can keep their television sets "in perfect playing condition—without a repairman."

The full-page ad was published in a local newspaper by the Bedford Co., New York. It promoted a book entitled "TV Owners Guide," priced at \$1.98.

"During the next year," the ad said in part, "it matters what the brand or model in condition of your TV set—you will probably waste \$50-\$100 on it."

Charging that the ad was the "most savage attack that has yet been leveled at the integrity of the TV industry," A. W. Bernsohn, managing director of NARDA, said the association is asking the FTC "to take all necessary action to stop such false statements about the TV industry."

NARDA is also requesting Underwriters' Laboratories to issue a statement "showing the danger inherent in the suggestion about having untrained persons working on TV receivers, because we feel there is danger of jeopardizing the excellent safety record which has been established by trained servicemen of this industry and establishing a fear in regard to television which will have a very negative effect on sales," Bernsohn further said in citing the incident.



Servicemen 'Bird-Dog' Appliances, Salesmen Follow Up and Sell

PHILADELPHIA—Training a crew of 14 service mechanics to recognize all old major appliances which date back 10 years or more, and to make a complete report on every one seen during the day, is the unusual system which has sold a lot of new refrigerators for Bergdoll's, Inc. here.

Maintaining one of the largest service departments in Philadelphia, Bergdoll's energetic sales and service manager, Tom Jones, feels that the service crew is one of his most valuable sales assets. "I run both departments," he said, "and I try to dovetail the work of each to the maximum benefit of the other."

Since the end of the war, Jones has trained every mechanic to quickly spot refrigerators, ranges, washing machines, and other appliances which are more than 10 years old. To do so, old catalogs and advertising literature are used, and the servicemen, of course, become familiar with many of them through shop work.

"We make this a serious operation," Jones said. "The reason is that our servicemen are in many homes every day, and whenever they locate an obsolete, worn-down appliance,

they are creating a prospect for the sales department."

Jones insists that all of his servicemen, upon finishing up the day's work, turn in a complete list of appliances observed in the homes which they have contacted on a service basis during the day. A mimeographed form is provided for the purpose. From these reports Jones can tell which homes will produce actual prospects, and assign his sales staff accordingly.

"All of our servicemen are accustomed to using every trick possible to get a look at the appliances," he said. "For example, we insist that every man ask the housewife for a drink of water, as soon as he enters the home. Most housewives take the serviceman to the kitchen, even if the work he is going to do is somewhere else in the house. This gives him an opportunity to look over kitchen appliances."

"He likewise finds some pretext for visiting the basement and other rooms of the house, with the result that he actually gets a good look at every appliance."

All of these leads are turned over to the sales manager, who routes

them to his salesman. This provides a steady flow of prospects. It has helped to keep the salesman active, and the store hits a high percentage of sales in homes which have thus been "bird-dogged" by mechanics. The serviceman gets a commission on every sale which results and they eagerly cooperate in the selling plan.

Unlike many appliance dealerships that feel that the "home demonstration" is too expensive, and attracts too many "free riders," Bergdoll's gives its salesman full authority to send out any appliance for home demonstration, at their own discretion. Of course, some of them come back.

However, Jones points out that one salesman had no less than 35 major appliances, ranging all the way from a refrigerator down to a sweeper out on trial in a single week, and before Friday of the following week, 25 of the units had been sold. That kind of volume is worth going to extra lengths, Jones believes, and therefore, he never hesitates to okay a home demonstration.

Jones likewise avoids the familiar "get-together class" of salesmen, servicemen, and executives. Instead, he sets aside an appointment to talk to each man on the sales and service staff on one day during the month, to discuss his problems and give him any help necessary.

"When the salesmen are individually interviewed in this way, they are far more likely to let down their hair, and bring out any grievances they may have," he said. "I get a better understanding of every man. We can iron out his problems more efficiently, and invariably, my sales results are better."

WSB Regulation 20 Applies Only to Inside Salesmen

WASHINGTON, D. C.—Wage Stabilization Board Regulation 20, which provides a 10% and cost-of-living raise to commission salesmen, applies only to the following groups, the WSB has explained:

Inside salesmen employed in retail and service trades establishments who come under Regulation 541 of the Fair Labor Standards Act or who belong to unions.

This excludes outside salesmen and commission salesmen whose work takes them away from their place of employment. These are under the jurisdiction of the Salary Stabilization Board.

Navy Saves Copper, Nickel By Using Plastic Piping

WASHINGTON, D. C.—About two tons of copper and nickel will be saved when the Navy installs plastic piping in several mine sweepers now being built, the Department of Defense announced recently.

The plastic piping will be used to carry sea water for which copper and stainless steel piping were previously essential.

On a recent eight-months sea test aboard a destroyer escort, the plastic piping proved that it did not corrode from sea water and was more resistant to heat and shock than metal piping. In addition, the plastic piping is expected to cost less than half that of copper-nickel pipe and one third that of stainless steel pipe.

Severe Shortage of Dairy Equipment May Result from Current Slump in Sales

HARRISBURG, Pa.—"Purchase of dairy equipment during the past year has not equalled the depreciation of that in use. Consequently, sooner or later, demands will be made upon equipment manufacturers which, in view of present government controls, may be difficult to meet," warned K. L. Wallace, Walker-Wallace Ltd., Toronto, Can., and president of Dairy Industries Supply Association, speaking to the annual Association of Milk Dealers.

Partly because the industry was extremely vigilant in presenting its claims to controls agencies, there has not thus far become apparent to users a serious shortage of dairy equipment, he said. Partly, however, this consequence is due to the having been a decided slump in the normal rate of purchasing of dairy equipment, so that a time of possible "pinch" for users has been postponed.

The temporary lull in demand by users has basically further complicated the shortage factor, however, for it has forced dairy equipment makers to apply for smaller amounts of controlled materials, proportionately, than other food processing equipment manufacturers.

"For the first quarter of 1952, requests for materials under the Controlled Materials Plan for dairy processing equipment were 25% below the quarterly level of the first half of 1950, whereas requests for such materials for other food processing equipment were 31% above the pre-Korean base."

These figures foretell, President Wallace believes, a still highly possible and conceivably severe shortage in the dairy equipment field.

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90's



Men folks worked from sun to sun... but Mother's work was never done... in the 90's. Wash days added to her burden... she spent many hours toiling near a hot, kitchen stove.

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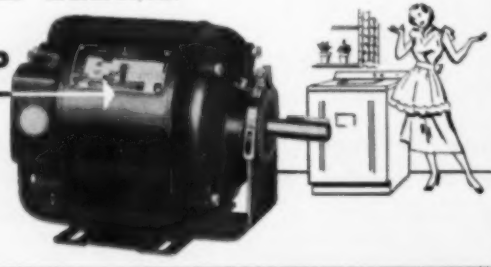
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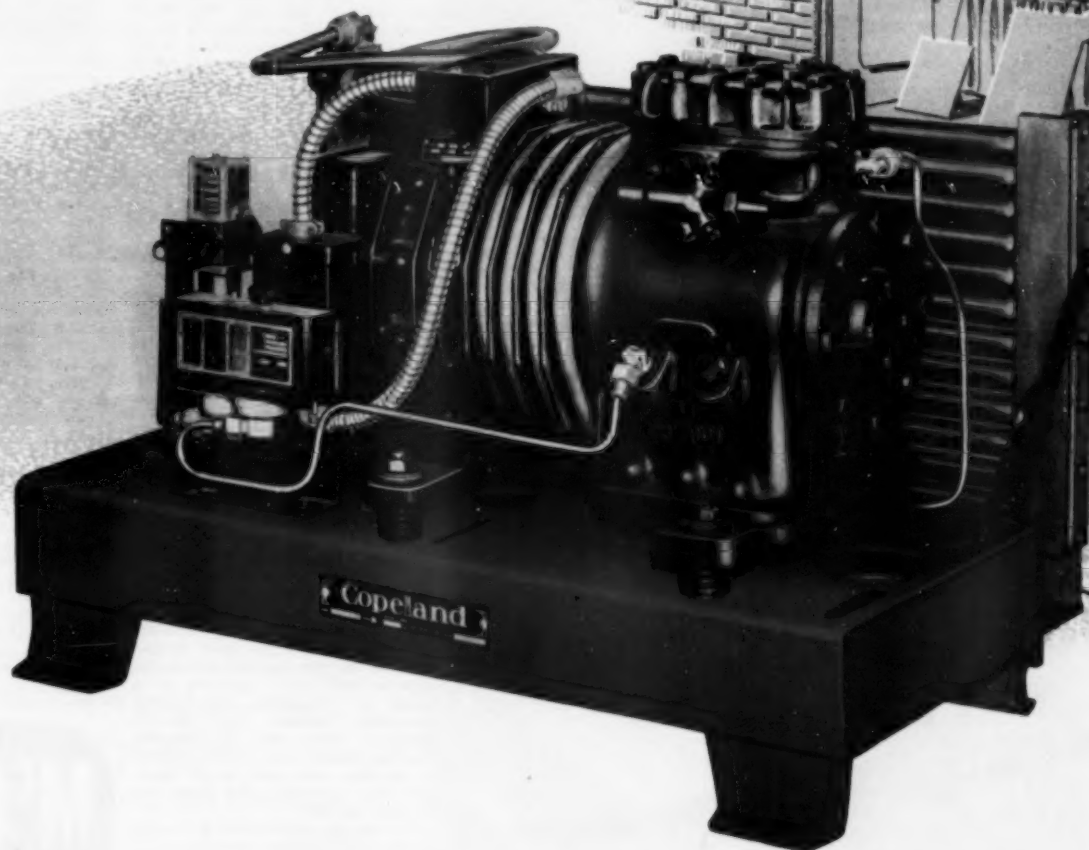


Victor

MANUFACTURERS OF THE FAMOUS VICTOR QUICKFREEZE
PRODUCTS CORPORATION • HAGERSTOWN, MD.

What's behind a tradition?

The Barber Pole, with its red and white stripes, is the traditional sign of the barbers. This traces back to the Middle Ages when barbers also practiced surgery and dentistry. The major form of surgery was bloodletting. To guide people to the shop of the barber-surgeon, a pole with red and white stripes was placed outside. The red stripes represented blood and the white stripes the bandage.



the Copeland tradition based on engineering foresight and accomplishment

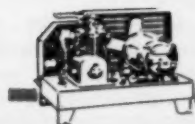
Behind every tradition are the people who founded it and have furthered it. An engineering department which insists upon continuous progress is the moving force behind the Copeland tradition. Outstanding among the improvements made by Copeland's engineers is COPELAMETIC . . . the ACCESSIBLE hermetic.

Realizing that 9 out of every 10 service calls were due to belts, seals and improper lubrication, Copeland's engineers designed a refrigeration unit which *actually eliminated these causes of refrigeration failure* — but provided complete ACCESSI-

BILITY. Valves, pistons, etc. can be serviced on the spot! A COPELAMETIC is built to give maximum service, with less time out for service repairs than is possible with a welded-in refrigeration unit. A COPELAMETIC, once installed, remains on the job and never needs be returned to the factory for repair.

COPELAMETIC . . . the ACCESSIBLE hermetic, eliminates 90% of *all* service calls. Durable, efficient and trouble-free, COPELAMETIC . . . the ACCESSIBLE hermetic gives long-lasting service. More than one million are in use today.

Air-cooled, remote COPELAMETICS range from 1/4 HP through 3 HP. There are water-cooled, remote units from 1/3 HP to 7 1/2 HP, inclusive. There are self-contained COPELAMETICS for all applications.



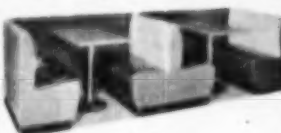
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There is space for 20 qts. of milk (or 28 if drop shelf is lowered) in the 10½-cu. ft. Westinghouse Frost Free refrigerator for 1952. In addition, model DFD-104 has a freeze chest which quick freezes and stores 41 lbs. of food and ice, a butter keeper, meat keeper, two Humidrawers, egg keepers, and shelves in the door.

Westinghouse Introduces 1952 Line--

(Concluded from Page 1, Column 5) and the Westinghouse nameplate above it in individual gold block letters. Frost Free models are further identified by the name "Frost Free" in gold script lettering opposite the door handle.

Arctic blue and gold color on the freeze chest door, meat keeper, and "Humidrawers" highlight the interior color treatment. The Egg Keeper and shelves in the door are of blue and white plastic.

Heading the 1952 refrigerator line is the 10½-cu. ft. Frost Free model DFD-104, which carries a suggested retail price of \$449.95.

Its full-width freeze chest, refrigerated on five sides, quick freezes and stores 41 lbs. of foods and ice. The freeze chest door is self-closing and can be used as a convenient loading shelf. Ice making equipment includes one 28-cube "Handiout" dessert tray and two 14-cube Handiout trays. All are made of anodized aluminum and are equipped with a handy lever cube release.

The meat keeper holds 16 lbs. of meat. It is a covered, sliding drawer made of anodized aluminum and slides quietly and easily on plastic glides. A chrome-finished trivet in the bottom assures air circulation around the meat.

The butter keeper, above the freeze

chest, holds ½-lb. of butter at temperatures for easy spreading. It is equipped with a covered plastic dish suitable for table use.

Two anodized aluminum Humidrawers slide on plastic glides and are sealed against ring-free glass tops.

Three shelves in the door provide convenient storage space for small packages and beverage bottles. The top shelf has a metal guard to prevent tall bottles from tipping. Three Egg Keepers on the inner door panel hold six eggs each and may be removed and taken to the work surface.

The 7½-cu. ft. DFD-75, has all the extra features of the higher-priced Frost Free models including a butter keeper, ½-bushel Humidrawer, an egg shelf in the door. The freeze chest will freeze and store 32 lbs. of food and ice. Ice cube making equipment includes two 14-cube Handiout trays and one 28-cube Handiout dessert tray.

Other Frost Free models in the 1952 line include the DFD-84, which carries a suggested retail price of \$399.95, and a companion model FD-84 at \$359.95. The DFD-84 has every feature of the DFD-104 except, of course, it is 2 cu. ft. smaller.

FREEZE CHEST REFRIGERATED ON FIVE SIDES

The FD-84 freeze chest is refrigerated on five sides and has freezing and storage capacity of 41 lbs. Ice making equipment is the same as the DFD-104 and DFD-84. Two Humidrawers will hold ½-bushel of vegetables. It is equipped with three shelves in the door for storing small packages and an egg shelf.

Westinghouse also includes in its 1952 line two models with full-width freeze chests: the DD-11 at \$379.95 and the DD-8 at \$274.95.

The 11-cu. ft. model DD-11 is equipped with a freeze chest with a capacity of 46 lbs. of foods and ice; a full-width storage tray will provide storage for an extra 150 ice cubes or short-time storage of 24 lbs. of frozen food. Its deluxe-type meat keeper holds 16 lbs. of meat, and two Humidrawers hold three quarters of a bushel of vegetables. Ice making equipment includes two 14-cube Handiout trays and one 28-cube Handiout dessert tray. Three shelves in the door will store small packages and containers and there are two egg shelves.

The 8-cu. ft. model DD-8 has quick freezing and storage capacity of 42 lbs. of food and ice, a full-width storage tray for short time storage of frozen foods or meat, a butter keeper and a Humidrawer of ½-bushel capacity. It also has two shelves in the door plus an egg shelf.

TWO MODELS HAVE VERTICAL EVAPORATORS

Two vertical freeze chest models are included in the new line: the SD-8 at \$249.95 and the HD-6 at \$214.95.

The 8-cu. ft. model SD-8 has a frozen storage volume of 22 lbs., ice making capacity for 38 cubes, a moonstone glass meat storage tray that holds 12 lbs. of meat, and a Humidrawer that holds ½-bushel of vegetables. The HD-6, a 6-cu. ft. model, has a freeze chest volume of 16 lbs., an aluminum meat tray, two 14-cube Selecto ice cube trays and storage space for eight quarts of milk.

The new upright, 6-cu. ft. home freezer, model UD-6, is a twin in exterior appearance and size to the DFD-75 refrigerator.

It includes a full-width quick freezing compartment and self-closing self-latching doors for all inner compartments. Total freezing and storage capacity is 213 lbs. of foods. Suggested retail price is \$299.95.

All refrigerator models use the ½-hp. hermetically sealed Westinghouse "Economiser" unit protected by a built-in watchman which automati-

cally turns off the power in event of an electrical or heat overload, then automatically re-sets.

Five additional electric ranges for 1952 are being announced by Westinghouse. A sixth model, the deluxe double oven "Commander," was introduced at the January Chicago market.

SUPER COROX SURFACE UNIT NOW IN LOW PRICE MODELS

The Super Corox surface unit that gets red hot in 30 seconds for fast-start cooking operations highlights the 1952 line and has now been extended to four models, including the low-priced Commodore range, reports R. M. Beatty, manager of the company's electric range department.

Other deluxe features continued in the new line include the "Two-Level" speed cooker for either deep well or surface cooking, the "Miracle Sealed Oven" with a Fiberglass heat guard seal around the throat of the oven for perfect heat distribution, and "Color Glance" surface controls with changing colors to show each selected heat.

The five models introduced and their suggested list prices are: the single oven Commander, BC-74, at \$389.95; the Champion, DC-74, at \$322.75; the Commodore, ECA-74, at \$279.70; the Challenger, EC-74, at \$236.65; and the Rancho, GC-64, at \$193.60. The double oven Commander, AC-774, carries a suggested list price of \$439.95.

The Two-Level speed cooker has a full size 8-in. unit with a range from "high" to "simmer." It can be used in the down position for deep fat frying or for slow, gentle cooking of soups and stews or can be raised to the platform level and locked into position as a fourth surface unit.

Equipped with a 2,000-watt Corox unit, the speed cooker brings cooking fat up to proper temperature quickly and maintains that temperature for fast service.

When the cooker is in the down position, cooking is done at the safety level and eliminates the possibility of a kettle of hot fat, boiling syrup, or water being tipped over.

are you using more copper

THAN IS REQUIRED?

Can you use tubing of a lighter wall, for instance, than you are now using, without losing any efficiency, and still be within standard?

Or if you contemplate a replacement, would a tube of smaller diameter serve the need as well? Would a shorter length suffice?

If, by changing the installation or slightly redesigning the unit, could you effect a saving of tube and still keep the unit at maximum operating efficiency?

Copper, as you know, is in short supply and we must conserve its use wherever possible. If in the case of copper or copper base alloy tubing you can figure out how you can use just a little less than you might normally employ, you will do your part in helping the defense program. If all of us would share in conserving this scarce metal, we could reduce our individual handicap and be able to carry on with very little loss of efficiency.

You can recognize the benefit this cooperative program can bring you.

WOLVERINE TUBE DIVISION

Calumet & Hecla Consolidated Copper Company
INCORPORATED

Manufacturers of seamless, nonferrous tubing
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Plants in Detroit, Mich. and Decatur, Ala.

Wolverine Mill Depots:

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NO JOINTS
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MAXIMUM HEAT TRANSFER
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•
VARIOUS FIN WIDTHS
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UNDERWRITER APPROVAL INSURES A
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**McCORD
CORPORATION**

DETROIT

WANTED

MECHANICAL ENGINEER with refrigeration or room air conditioner experience. Excellent opportunity with well established AAAI manufacturer who is a leader in this field. Location in Mid-West. Give all details and state salary expected in first letter. All replies will be held in strict confidence.

Write Box 3920

Air Conditioning & Refrigeration News

COLOR

**It sells...
and sells...
and sells!**

Color! Color! More of it in every home! And most of all, in the kitchen! Women prefer it, demand it!

Color first appeared in Inland "Magic Touch" Ice Trays last year. It was an instantaneous success. It helped immensely in selling new refrigerators and greatly increased replacement sales.

Color will be a still bigger selling force this year. And Inland is promoting it, more strongly than ever. All national magazine advertising will show Inland Trays in full, life-like colors.

As shown here! Note the cheerful, appealing blue of the Inland Tray. Your women customers will love it when they see it in your display room. They'll buy it . . . for looks alone!

LIFT! TILT! The amazing, *instant* convenience of Inland "Magic Touch" Ice Trays . . . plenty of free, dry ice cubes with a "lift" of the lever and a "tilt" of the grid . . . is stressed in every Inland Ice Tray advertisement. It helps you *sell* refrigerators.



"Magic Touch"

ICE CUBE TRAYS

INLAND MANUFACTURING DIVISION, General Motors Corporation, Dayton, Ohio

*For the rest of Inland's
COLOR story . . . and its
promise of easier re-
frigerator sales, more
sales and bigger profits
for you . . . see the other
side of this insert.*

COLOR

Is added to Inland's exclusive features!

Shown here is another Inland Tray . . . this one in bright, alluring gold. It will attract any woman's eye. She'll think how pleasingly it would decorate her new refrigerator.

And always, remember, Inland Trays offer the amazing and exclusive advantages of the "Magic Touch!" The unmatched convenience of Inland Trays has given them unquestioned leadership.

Here, in any Inland Tray, is the easiest, fastest way to get plenty of ice cubes . . . without splash or splatter . . . big, sparkling cubes, free and dry, ready to plop into the glasses. That "Lift! Tilt!" convenience, in itself, has sold millions of Inland Trays . . . and has helped to sell millions of refrigerators.

LIFT! TILT! Use it as a selling demonstration for your refrigerators. Slip an ice-filled Inland Tray from a refrigerator. *Lift* the lever . . . *tilt* the grid . . . *show* the ready-to-use ice cubes! No demonstration could be more compelling. Make the most of it!



"Magic Touch" ICE CUBE TRAYS

INLAND MANUFACTURING DIVISION, General Motors Corporation, Dayton, Ohio

The refrigerators you
sell . . . whatever the make
...can come to you
equipped with Inland
"Magic Touch" Ice
Trays. Insist on getting
them. They'll help sell
refrigerators!

Process Makes Fresh Water from Sea Water

Broad Scale Use May Ease Water Shortage For Condensing Purposes

BOSTON—A new process for de-salting sea water, which could provide great new reservoirs of fresh water for use in industry, agriculture, and the home wherever water is now scarce, was demonstrated here Feb. 20 at a meeting of the American Research and Development Corp.

(Broad-scale use of such a process might relieve a growing tendency to impose restrictions on the use of water for condensing purposes in refrigeration and air conditioning systems, at least in those areas bordering on bodies of salt water.)

The process is based on the use of electrical energy in conjunction with new synthetic membranes that, it is said, makes possible for the first time the continuous economical de-salting of sea water, brackish water, and industrial solutions.

The membranes do their work by a chemical process known as "ion exchange," in which positive and negative electrical charges are interchanged, leading to the separation of certain minerals and salts according to the electrical charges they carry.

A stream of sea water fed to a unit using the membranes emerges split into two streams—a fresh-water stream, two thirds of the volume of the feed and containing practically none of the salt, and a brine stream, one third the volume of the feed and containing all the salt.

The fresh was may be used for drinking or for industrial or agricultural purposes. The brine may be further treated to yield salt, magnesium, or other chemicals derived from sea water.

Announcement of the new process was made by Prof. Edwin R. Gilliland of the Department of Chemical Engineering at the Massachusetts Institute of Technology, and president of Ionics, Inc. of Cambridge, Mass., an affiliate of the American Research and Development Corp.

Electric power costs will be only a third of those required in the best distillation methods now in use, Dr. Gilliland declared.

With the new membranes, it is stated, fresh water could be produced from the sea at a power cost of as low as 6 cents a thousand gallons. Including the cost of amortizing the equipment, the cost of sea-water purification will range between 10 and 20 cents a thousand gallons, depending on the rate of amortization.

"In our western states as much as 10 cents a thousand gallons is paid for fresh water for ordinary industrial purposes and much more for specialty purposes," said Dr. Walter Juda, consultant at the Oak Ridge National Laboratory and head of the group that developed the method. He is vice president of Ionics.

"For irrigation, up to 29 cents is paid for water where there is a high concrete block one-story building.

and valuable yield an acre," he added, "and we've been told as high as \$7 to \$8 a thousand gallons is paid for drinking water in areas of extreme aridity."

First large-scale use is likely to come, Dr. Juda said, in lands where water is brackish, or a fifth to a tenth as salty as sea water.

\$500,000 Fire Destroys Part of McCall Plant

ALBANY, N. Y.—Fire of undetermined origin destroyed a portion of the McCall Refrigerator Corp. plant in Greenport, Columbia county. Damage was estimated at more than \$500,000.

Fire officials said the blaze apparently started in a barrel of rubbish in the carpenter shop at the rear of the 750-ft. long brick and concrete block one-story building.

About two thirds of the building was destroyed in the fire and the remaining portion was damaged by water and smoke. Approximately 200 completed commercial refrigerators, a large quantity of materials, and a number of machines were ruined.

Company officials said all the materials, including blueprints and patents were saved from the office.

Chain Tries New Twist to Free-Laundry-Wash Offer

BUFFALO—Bestway Stores, operating five appliance outlets here, came up with a new twist in the sale of electric washers.

While many appliance stores have invited prospects to bring in their laundry and try out a washer in the store, Bestway made it a lot easier for the prospect by offering to send a trial washer to the woman's home, accompanied by a home economist.

The home economist did the family wash, without charge, merely as a demonstration. There was no obligation of any kind. If the customer liked the washer, she could keep it and receive a trade-in on her old machine.

Retailer Places 6-Carload Order For Admiral Refrigerators

CHICAGO—A record order for six carloads of 1952 refrigerators has been received from Burk's Stores, Inc., which operates a chain of eight appliance and television outlets in the Los Angeles area, Leo H. D. Baker, vice president-appliances of Admiral Corp., announced recently.

The order, which represents nearly \$250,000 at retail, was placed through Herbert H. Horn, Inc., Admiral's southern California distributor.

FTC and RACCA Officials Meet To Discuss Petition For Trade Practice Rules

WASHINGTON, D. C.—A recent conference here between Ames Williams, attorney for the Federal Trade Commission, and Nate Edelstein, executive vice president of Refrigeration & Air Conditioning Contractors Association, covered the current status and future course of a petition for fair trade practice rules for the commercial refrigeration field which RACCA filed last fall with the FTC.

Williams said that each of the associations mentioned in the petition, plus some other groups, were being contacted to provide further information for the commission.

Edelstein explained to Williams that the prime purpose of a set of fair trade practice rules would be to educate those in the industry on proper and fair methods of competition. He said that RACCA was not seeking the prosecution of persons who might be violating anti-trust laws, but of indicating the kind of acts that might be considered to be violations.

The RACCA representatives stated that dairies, frozen food producers, soft drink firms, and others who gave away or sold refrigeration equipment together with an obligation to buy only their products, a tie-in sale,

were violations of the various anti-trust laws.

He pointed out that Section III of the Clayton Anti-Trust Act was distinctly broad enough to bring the above violations within the purview of that Section as well as Section V of the Federal Trade Commission Act which deals with "unfair competition and unfair acts or practices." Other violations came within Section II of the Clayton Anti-Trust Act under the general title of "price discrimination" in which "exclusive dealings" is the subject matter.

Williams said he will draw a report and submit it to the FTC which, if the findings warrant it, will call a formal trade conference with a view to establishing fair trade rules.

Reg. W Violation Means 15-Day Suspended License

PHILADELPHIA—A 15-day suspension of their license to make instalment sales of television sets, refrigerators, and other articles covered by Regulation W was meted out to Kirschner Bros. here recently by the Federal Reserve Board.

At the same time, the U. S. District Court here enjoined the partners, Jacob, Benjamin, and Isadore Kirschner, from further violating the instalment sales regulation.

The issuance of the injunction and the entry of the FRB order were consented to by the partners.



With ALCO Ammonia Controls "across the board", you'll have a sure checkmate on excessive operating and maintenance costs. ALCO Controls are ruggedly built for dependable service and long, productive life. They keep your refrigeration system at peak efficiency, producing maximum ice at minimum cost.

Write for our Ammonia Bulletin #172 and SEE YOUR ALCO WHOLESALER



Designers and Manufacturers of Thermostatic Expansion Valves; Pressure Regulating Valves; Solenoid Valves; Float Valves; Float Switches.

ALCO VALVE CO.

853 KINGSLAND AVE. • ST. LOUIS 5, MO.

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RUDY
mild steel
EVAPORATORS

Standard mild steel models...
galvanized...super finished
...styles for any application
...prompt service...low cost.

WRITE FOR DETAILS

RUDY Manufacturing Co.

Specialists in
Manufacturing Evaporators and Condensers

DOWAGIAC, MICHIGAN



*Entirely
NEW!
Completely
DIFFERENT!*



This is a 10.6 cu. ft. Imperial model. Also available in a 9 cu. ft. size and a 10.8 cu. ft. two-door Imperial model.

The Cycla-matic Frigidaire



A Wonderful New Food Freezer and Refrigerator Combined

How you've waited—and waited—for a refrigerator-freezer combination like this revolutionary new Frigidaire! So startlingly new in carefree convenience—so completely automatic—that it actually ushers in a new era in refrigeration service. Why, it even gives you a new, safer kind of cold!

Levelcold—a new idea in cold! Outside weather makes no difference to Levelcold. Blow hot, blow cold, Levelcold temperatures stay super-safe, super-cold. Gone are the ordinary refrigerator's "see-saw" temperatures that steal goodness and flavor from foods. Levelcold is the finest cold known, for both refrigerator and food freezer. Zero-zone safe in the food freezer, where foods can't thaw and re-freeze. Super-safe in the

refrigerator, as the built-in Food Safety Indicator proves. And always *uniform*—just as cold in the big Hydrators as on the shelf nearest the Refrig-o-plate.

Completely automatic, too! Frigidaire automatically answers to changes in weather—reacts trigger-fast to heavy or light use—without setting a single dial or control. The Cycla-matic system rigidly controls cold in the Food Freezer—constantly regulates the flow of cold in the Cold-Wall chilling coils, and in the Refrig-o-plate—a device which helps cool the refrigerator, and also controls excess moisture. The Cycla-matic Frigidaire gives you the most automatically controlled, most constant refrigerator protection ever known!

Here Is Your Food Freezer . . .

Where Levelcold keeps frozen foods zero-zone safe

Not an ordinary "freezing compartment" — but a separate, completely insulated Food Freezer that keeps all frozen foods in tip-top condition for months. And, because it is a true freezer, it has no defrosting heating devices to melt ice cream, to "mush" frozen foods. Foods always stay store-fresh, store-clean, easy to use.



Here you can see the thick insulation that surrounds the Food Freezer and completely seals it off from the Refrigerator below.

. . . and Here Is Your Refrigerator

Protected always by Levelcold temperatures — packed with more conveniences than you've ever seen!



LOOK! A REAL FOOD FREEZER PLUS A WONDERFUL REFRIGERATOR — ALL IN ONE!

New Cyclamatic Defrosting — gets rid of frost before it collects

The Refrig-o-plate, an important part of the cold-making system, and the revolutionary new Cyclamatic defrosting principle, work hand-in-hand to end two of the most annoying problems found in many refrigerators — too much moisture, and manual defrosting. The Refrig-o-plate attracts the excess moisture, and, as soon as the filmiest veil of frost appears, Frigidaire's Cyclamatic defrosting banishes it like magic. Without clocks, timers, counters or heaters. It's the most reliable, simplest defrosting system known. And only Frigidaire has it!

New "Roll-to-You" Shelves — put all food at your finger tips

Every shelf rolls out full-length — easily, silently — on satin-smooth nylon rollers. No more "hide-and-seek" with back-shelf foods. Pull-out Hydrators, too — sliding utility tray — and storage space on the door! This Frigidaire puts more food within easy reach than any other refrigerator ever built!

Meter-Miser cold-making power — keeps food safe even in the hottest weather

More reserve power than you'll ever require, even for hottest summer needs! The Cyclamatic Frigidaire is powered by the greatest cold-making mechanism ever built — the Meter-Miser. Safe, sure, dependable, quiet — and above all, economical. And only Frigidaire has it!



Frigidaire

America's No. 1 Refrigerator

WANT TO SPEND 7 EXCITING MINUTES?

Thousands of prospects all over America saw this advertisement in full color in Feb. 23rd Post and they're now getting the complete story on the new Cyclamatic Frigidaire from their Frigidaire Dealers! It takes just 7 minutes.

Frigidaire Division of General Motors
Dayton 1, Ohio.



Grain Firm Orders 14 Conditioners for Offices

MINNEAPOLIS—The Northern Air Conditioning Co., distributor of Typhoon air conditioning equipment here, has received an order from the F. H. Peavey Grain Co. for 14 Typhoon packaged units for application in a number of offices.

The units will be installed in the offices of the Peavey Co. and its subsidiaries, King Midas Flour Co., Van Dusen Harrington, and the Peavey Lumber Co. All these offices are located in the Grain Exchange Building in Minneapolis. Installation of this equipment, which totals well over 100 tons capacity, is said to be scheduled for completion by June 1 of this year.

Floyd Hart, owner of Northern Air Conditioning, cites this order as concrete proof of the dollars-and-cents value of office air conditioning.

"Previously," he says, "Peavey bought a number of Typhoon units to determine whether the benefits of office air conditioning could produce profits in terms of increased efficiency and reduced absenteeism and employee turnover. This order is the result of their investigation."

"Owners of theaters, restaurants, supermarkets and similar establishments have long ago ceased to question the value of air conditioning in their respective fields. But for offices, the advantages of air conditioning are not quite so apparent or easy to demonstrate. That's why we appreciate it when office air conditioning is put to the test—especially since we know it can't come out any other way."

Must Increase Rates To Assure Supply, Service, Columbia Gas Head Says

NEW YORK CITY—Columbia Gas System, Inc., one of the country's biggest natural gas producing and distributing systems, must raise its rates to the point where it can "meet our obligations as a public service company and protect the investments of our stockholders," according to Stuart Miller Crocker, chairman.

Crocker asserted that while the cost of everything the company buys is "far higher now than in 1941," the cost of gas has risen very little. He added: "If we are to continue high quality service, if we are to satisfy the demand for more and more gas, we must earn more money."

Navy To Expand Depot, Reactivate Air Station

WASHINGTON, D. C.—The Navy has announced plans for a \$16 million construction program at the Naval Ammunition Depot, Hastings, Neb., and for reactivation of the former Naval Air Station at Hutchinson, Kans.

Bulk of the funds for expansion of the ammunition depot will be allotted for erection of storehouses and magazines to ease the Navy's shortage of storage facilities.

To be reactivated in June, the former Hutchinson air station will be used primarily for a multi-engine aircraft training unit. It is expected to accommodate 1,800 naval personnel.



(Concluded from Page 1, Column 1) between the flatfoot and the bank president.

Detective: "Describe the culprit, please."

President: "Well, he was about 58 inches tall and \$58,000 short."

The embezzler has not been apprehended as of this date.

Add Sports Stories

Gamblers thought they had "fixed" a rowdy-dow between two colored boxers. Early in the second round, one of the so-called fighters was knocked flat on his paws.

The referee, observed that this fellow was entirely conscious and in full possession of his faculties, began the preliminary counting.

Instead of stopping at "ten" in the usual manner, he continued to 28, 29, and 30. The inert figure on the canvas (the lad who was supposed to win) moved slightly.

"You is very fair, Mistah Referee," he acknowledged, "but ah is thoo foh de night."

Slogan of the Year

Publicity director of a big corporation—a man whose name would be familiar to you if we revealed it—got his start in Hollywood. But he didn't last long there.

In the fabulous City of Lost Angels, this budding publicist had been hired by a newly-formed, short-lived producing firm which incorporated the name, MIRACLE PICTURES. This firm assigned our friend to dream up a slam-bang slogan. He did. It was:

"If it's a good movie, it's a MIRACLE."

He likes living in the East now, he says.

Add Sport Stories

Prominently displayed in the window of a sporting good store was a showcard which read: "Fishing Tickle."

A customer walked in, asked for the proprietor, and pointed out the error. "Hasn't anyone told you about it before?" he wondered.

"Sure, sure," replied the storekeeper. "Lots of people mention it. Every time they come in to correct my sign, they always buy something."

Pullman Service

Spectacle of 18 or more grumpy men in undershirts trying to do their morning ablutions in a pint-sized Pullman gent's room is more pathetic than comic. Wonder why cartoonists haven't had a field day with this? Don't they ever travel on trains?

Out of many grimly funny scenes of that sort, this one sticks in our memory:

"Wait, fella! That's my toothbrush you're using."

"Oops, sorry. I s'posed it belonged to the Pullman company."

Flintry Character

Here's another businessmen's story which a younger generation may not have heard. In support of his request for a raise in salary, a department chief cited to the Big Boss the following personal calamities:

1. His wife was in the hospital.
2. His daughter's teeth needed straightening.
3. Fire had destroyed their home.
4. His son had eloped with the department chief's secretary and took all the money he and his wife had hidden in the mattress.
5. His old mother was dying . . . and . . .

Before he could continue, the Big Boss wiped the tears off his glasses, called for his comptroller, and gave the latter an order.

"Cyrl, throw this guy out of here. He's breaking my heart."

Truth Well Spoken

Another oldie about the Big Boss.

Having been sold a bill of goods by a professional Management Consultant, the Top Brass Hal underwrote a new efficiency system in the office. A key employee refused to cooperate and, in consequence, was "put on the carpet."

"Sam," sighed the BB, "don't you believe in efficiency?"

"Yes, sir. But someone has to get the work done around here."

Texas Pride

Having made millions from oil wells on his parched-out land, an ambitious Texan decided he'd better acquire more culture. All his life he'd enjoyed reading, so he enrolled in an English Literature course at Southern Methodist university.

From Beowulf to Thomas Hardy, and from Chaucer to Bernard Shaw, the oil millionaire soaked up the college's semesters in English Lit. Finally, the professor who had guided his belated scholastic career, gave him Shakespeare's Complete Works to read.

When he had finished the millionaire was deeply impressed. He told his professor: "Wonderful, simply wonderful, that Shakespeare. Doubt if half a dozen men in Texas could have written it."

Whipping-Boy

Last summer this newly rich tourist from Texas was visiting a tiny "gen'ral store" in the wooded lands of northern Michigan. He sat there for awhile, just watching.

Three old gentlemen, toasting their heavy boots on the sides of an ancient wood stove, paid no attention to this "furriner" from Texas.

"What's the weather for this area supposed to be tomorrow?" the Texan ventured.

"Wal, really can't say," grumbled one of the old timers. "Used to be a man could tell about the weather. But now the Government has seen and stepped in and took over and you can't tell what nothing's going to be!"

Hereditary Democrat though he was, our Texan got the point.

I BOUGHT MY WIFE A "MINK"

with the money I saved
in my service department



SINCE SWITCHING TO

TYPHOON

AIR CONDITIONING

• You work your head off to land that air conditioning job. Then what happens? So many service headaches, you wind up in the red. But not with Typhoon. Forty years of Typhoon experience in manufacturing cooling equipment has produced a unit so ruggedly engineered it holds service calls to a minimum. Typhoon units deliver full-rated capacity without overtaxing equipment because all Typhoon units have oversize, slow speed, rugged compressors, oversize all-copper cooling coils and all-copper condensers. Typhoon dealers receive the utmost in factory cooperation. Parts ordered are generally shipped within 48 hours to ease the pressure on your service department. Typhoon takes the trouble out of air conditioning, leaves the profits in.

Air Conditioning Units — 1½-20 tons, Multi-packaged Systems up to 60 tons, Prop-R- Temp Heat Pumps — 2-20 tons, Evaporative Condensers, Packaged water chillers.



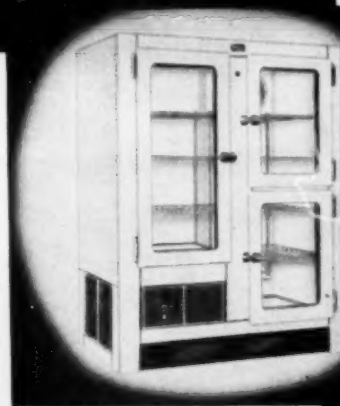
TYPHOON AIR CONDITIONING CO. INC.

Specialists in air conditioning since 1909

794 UNION STREET, BROOKLYN 15, N. Y.



At New Low Prices **KOCH**
Self Contained Reach-in Refrigerators



PORCELAIN INSIDE and OUT

MODEL 3842 (42-cu. ft.) with Glass Doors

Also Available as Model 3865 (65-cu. ft.)

All models self-contained, with 5-year warranty on motor compressor.

½ h.p. unit furnished with Model 3842. ¾ h.p. unit furnished with Model 3865.

STANDARD EQUIPMENT INCLUDES:

Solid doors
Adjustable wire shelves throughout
Interior lighting

OPTIONAL EQUIPMENT INCLUDES:

One or more doors triple-glazed
Meat rails and hooks behind long door
Bakery bun pan racks

Get the NEW DEALER Proposition, Today!

KOCH

refrigerators, inc.
NORTH KANSAS CITY 16, MO

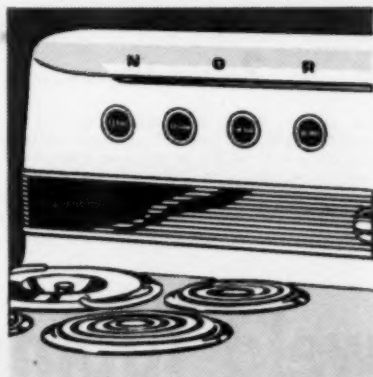
Features they WANT—features they GET!

New 1952 NORGE Ranges Sweep the Industry with the Year's Most Exciting Sales Features



New! NORGE CP GAS RANGE—the most practical—and saleable—automatic gas range ever designed. Complete with automatic electric ignition on both the oven and broiler, this new Norge makes its debut in '52 featuring the sensational Pick-A-Pan Cabinets.

NEW Tele-Speed Feature on New NORGE Electric Range lights the way to big sales increases for dealers



Model E-88

Ever hear a customer complain about complicated instrument panels? Controls that need a "master-mind" to figure out?

Switch on this new Norge Electric Range and watch her eyes light up! Instantly, the new Tele-Speed on the back panel flashes on—tells her at a glance (even from across the kitchen) which unit is operating and which of the 7 cooking speeds is on! No complicated color schemes to memorize.

There are four Tele-Speeds on this new Norge—one for each surface unit and the deep-well cooker. You guessed it! Only Norge has 'em!

YOU WON'T KNOW WHAT YOU'RE MISSING IF YOU DON'T SELL

NORGE

The line that pays off for the dealer!

PICK-A-PAN Cabinets featured on both the sensational new NORGE CP Gas Range and NORGE Electric Range

You know it—everyone knows it! Prospects look for features! Show 'em the extras they get—the exclusives—and, brother, you've got a sale!

The sensational Pick-A-Pan Cabinets fit that bill to a "T".

Featured on both the sensational new Norge CP Gas Range and new Norge Electric Range, these cabinets provide super-efficient storage for all the pots and pans needed for daily use. Provide space for lids and kitchen tools, too. Even have a special compartment for salt and pepper containers.

And talk about convenience! Listen: to reach for a pan, all a housewife has to do is slide out the Pick-A-Pan rack and there it is! No more groping! No endless searching! It's a feature that'll ring up sales in a hurry!

Norge Introduces New CP Gas Range for '52 Prospect shopping for an automatic gas range built to rigid CP standards?

Show her the best, the finest—the new—brand new—Norge deluxe CP Gas Range. Nothing could clinch a sale faster! Both the oven and broiler have complete automatic electric



ignition plus 100% safety gas shut-off!

Check these features and you'll see why it's the biggest profit potential in the field: exclusive *SpirO-lator* burners focus heat evenly under any size utensil; *Pick-A-Pan* Cabinets provide super-efficient storage; *Picture-Window* Oven provides safe, balanced heat; *Slide-out, Drop-front* broiler barbecues and grills to perfection.

Add these features to scores of others, and you'll get an idea of the sales sensation the new Norge CP Gas Range will be in '52!



New NORGE Fully Automatic ELECTRIC RANGE tops the field in features that sell! Two Pick-A-Pan Cabinets plus the sensational Tele-Speed heat indicators plus dozens of other sure-fire features point the way to your biggest selling year—ever!

HOUSEHOLD REFRIGERATION

Deepfreeze Defrost System Explained, Refrigerator Specifications Given

NORTH CHICAGO, Ill.—Operation of the automatic defrost system on two models (DWA-960 and DWA-1150) in the recently introduced 1952 line of Deepfreeze household electric refrigerators is described as follows:

Defrosting action is automatic after the defrosting control dial is set at the time of installation. The automatic defrost action is normally set to start at 8 a.m.

The refrigerating mechanism is automatically turned off by a clock. This clock action shuts off the compressor and turns on electric heating elements. These electric elements are installed parallel to and in contact with refrigerant tube lines in the evaporator.

When ice or frost is melted and

temperature reaches above 32° F.—that is, when all of the frost is gone—a thermostat attached to the evaporator turns off the heating element and starts up the compressor, putting the refrigerator back in normal operation.

Period of the defrost operation is said to be rapid enough to prevent thawing of frozen foods, and ice cream remains hard during the defrost operation.

The defrost water is drained from the baffle below the freezer compartment through a trap (which is removable for cleaning) down a drain into a pan in the compressor compartment. The refrigerant discharge gas line (hot line) passes through the drain pan, effecting complete evaporation of the defrost water.

Specifications of 1952 Deepfreeze Refrigerator Models

Model No.	DWA-1150	DWB-1150	DF-1150	DWA-960	DWB-960	DG-960	DF-960
Styling and Design							
Full Length Door	X	X	X	X	X	X	X
Ten-Point Temperature Control	X	X	X	X	X	X	X
Automatic Defrosting	X			X			
Deepfreeze Freezer Compartment		X	X	X	X	X	X
Full Width Freezer	X	X	X	X	X	X	X
Freezer Shelf	X	X	X	X	X	X	X
Insulated Plastic Freezer Door	X	X	X	X	X	X	X
Ice Cube Trays							
Single-Lever Release	1	1		1	1		
Single Plastic Grid	1	1	4	1	1	4	4
Double Dessert Tray Lever Release	1	1		1	1		
Frozen Storage Drawer		X	X		X	X	X
Removable Half Shelf	X	X	X	X	X	X	X
Adjustable Shelf	2	2		1	1		
Glass Shelf (Top of Crispers)	X	X	X	X	X	X	X
Crispers—Clear Polystyrene	2	2	2	2	2	2	2
Features in the Door							
Bottlestar	1	1		1	1	3	
Handy Bin—Clear Polystyrene	1	1		1	1		
Butter Box with Spread Control	1	1		1	1		
Eggstar	1	1		1	1		
Handy Jugs with Handy-Frame Handles	2	2		2	2		
Capacity and Dimensions							
Shelf Area, Sq. Ft. (NEMA)	19.9	21.5	21.5	15.7	17.3	17.3	17.3
Net Capacity, Cu. Ft. (NEMA)	11.0	11.5	11.5	9.3	9.6	9.6	9.6
Width	30 3/4	30 3/4	30 3/4	29	29	29	29
Depth	24 1/2	24 1/2	24 1/2	24 1/2	24 1/2	24 1/2	24 1/2
Height	61	61	61	56 1/2	56 1/2	56 1/2	56 1/2
Prices	\$269.95	\$449.95	\$399.95	\$359.95	\$409.95	\$319.95	\$289.95

Brown Heads Wesco Branch At Watertown, N. Y.

WATERTOWN, N. Y.—T. Dean Brown has been promoted to branch manager of the Westinghouse Electric Supply Co. here. He has been associated with the firm for the past seven years in the Watertown district.

G-E Appliance Center Moves

SEATTLE—General Electric Co.'s appliance service center here has been moved to 401 Westlake Ave., J. D. Phillips, product service manager for the small appliance division, has announced. The service center was formerly located at 211 James St.

Admiral Puts Conventions, Election Returns on Radio and TV over ABC

CHICAGO — Complete television and radio coverage of the Republican and Democratic national conventions in July and election day returns on Nov. 4 will be sponsored by Admiral Corp. over the full American Broadcasting Co. TV and radio networks, John B. Huarima, executive vice president of Admiral, announced today.

Negotiations for the \$2,000,000 package were started several weeks ago, Huarima said, but final announcement was withheld pending the signing of the complete lineup of ABC commentators and newsmen, including John Daly, who will coordinate the entire operation, Elmer Davis, Drew Pearson, George Sokolsky, Erwin D. Canham, Paul Harvey, Martin Agronsky, Walter Kiernan, Ted Malone, and Pauline Frederick.

American Broadcasting Co. is constructing special radio and television booths and studios at Chicago's International Amphitheater and at the Conrad Hilton hotel headquarters of both parties. Twelve television cameras will be used to provide the most complete coverage of the Republican convention from July 7 through 11, and of the Democratic convention from July 21 through 25.

More than 300 radio stations will carry the proceedings, Huarima said. The number of television stations that will transmit the picture coverage throughout the country still has not been determined, he added.



Frost-Free Story

J. I. Anderson, merchandise manager, household refrigeration department, Westinghouse Electric Appliance Div., is shown telling the story of the Frost-Free automatic defrosting display to Walter Mendenhall, center, major appliance buyer for the Lazarus Co., Columbus, Ohio, and J. O. Loeffer of the Westinghouse Electric Supply Co.'s Cincinnati, Ohio, office. The display was based on the Westinghouse dealers' "Ring the Bell" promotion that was a successful sales builder for Westinghouse Frost-Free models in 1951.

Philco Declares Dividend on Common, Preferred Stock

PHILADELPHIA — The board of directors of Philco Corp. recently declared the regular quarterly dividend of 40 cents per share on the company's common stock payable March 12 to holders of record Feb. 28.

The board also declared the regular quarterly dividend of 93 1/2 cents per share on the corporation's preferred stock, 3 1/2% series A, payable April 1 to holders of record March 15.

Starr Heads Advertising For L. A. Distributor

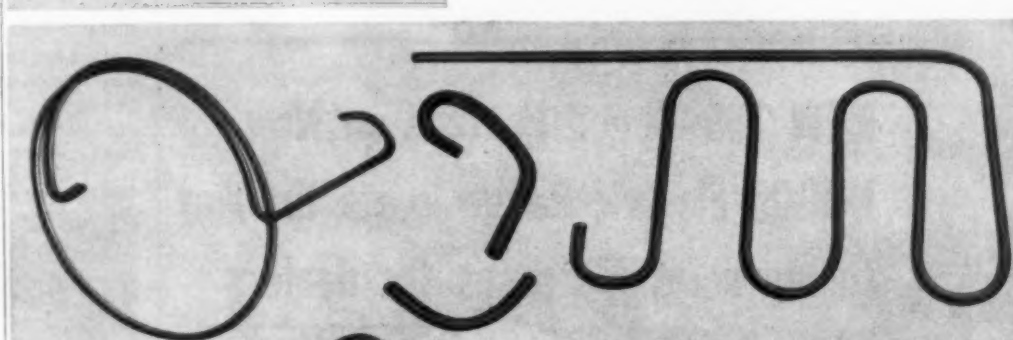
LOS ANGELES—Sues, Young & Brown Inc., Los Angeles wholesale distributor, announced the appointment of Ashby Starr as advertising and sales promotion manager.

Starr formerly headed his own advertising agency in Los Angeles. He succeeds Peter Frank, executive with the firm for the past six years, who resigned recently to enter the pharmaceutical field, according to the announcement.

Your greatest

1. DESIGN SAVINGS

Bundy engineers quickly spot ways to save while parts are still in design phase. Above: compressor connector tube's original specifications called for 9/16" O.D. tube reduced to 3/8" at one end, a multi-operation reduction. Bundy engineers reduced part cost for customer by expanding one end of less-expensive 1/2" O.D. tube to 9/16" and reducing other end to 3/8"—in one operation.



2. TIME SAVINGS

In the last 20 years, Bundy has fabricated millions of refrigeration tubing parts, including all types of evaporator and condenser coils, and refrigerant lines of all shapes and sizes. There's every reason to believe that Bundy may have licked the production problems inherent in your part—and can swing into high-gear fabrication without costly or annoying delays.



Bundyweld Tubing

DOUBLE-WALLED FROM A SINGLE STRIP

WHY BUNDYWELD IS BETTER TUBING



Bundyweld starts as a single strip of copper-clad steel. Then it's... continuously rolled twice around laterally into a tube of uniform thickness, and... passed through a furnace. Copper coating fuses with steel. Presto... Bundyweld, double-walled and brazed through 360° of wall contact.



NOTE the exclusive patented Bundyweld beveled edges, which afford a smoother joint, absence of bead and less chance for any leakage.

SELLS FREEZERS FOR YOU...

"Let's Prove It!"

This BEN-HUR "Let's Prove It" Family Savings Estimator

Your prospect sells himself when you let him fill out this Family Savings form! Shows dollars-and-cents savings based on actual family food needs. PROVES how fast a Ben-Hur Freezer pays for itself! It's irresistible!

Ask your Ben-Hur Distributor about this "Let's Prove It" idea — and other surefire Ben-Hur selling aids. Or write for the whole story.

BEN-HUR MFG. CO. - Dept. AC - 434 E. Kaula Ave. - Milwaukee 12, Wisconsin

BEN-HUR FARM and HOME FREEZERS

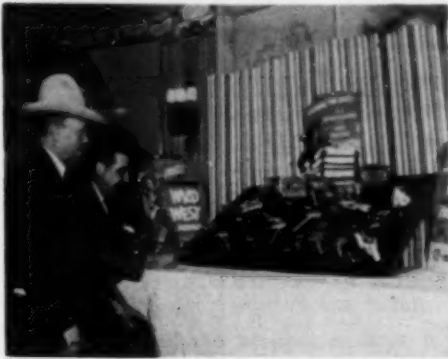
HEALTHFUL LIVING THROUGH FROZEN FOODS

BEN-HUR MFG. CO. - Dept. AC - 434 E. Kaula Ave. - Milwaukee 12, Wisconsin

BEN-HUR FARM and HOME FREEZERS

HEALTHFUL LIVING THROUGH FROZEN FOODS

Bundy Tubing Distributors and Representatives: Cambridge 42, Mass.: Austin-Havings Co., Inc., 226 Bimby St. • Chicago 22, Ill.: Latham-Hickey Co., 3323 W. 47th Place • Cincinnati 2, Ohio: A. B. Murray Co., Inc., Post Office Box 476 • Philadelphia 3, Penn.: Rulon & Co., 1717 Sanson St. • San Francisco 30, Calif.: Pacific Metals Co., Ltd., 3100 19th St. • Seattle 4, Wash.: Eagle Metals Co., 4735 First Ave. South • Toronto 5, Ontario: Canadian Alloy Metal Sales, Ltd., 881 Bay St. • Bundyweld nickel and Monel tubing is sold by distributors of nickel and nickel alloys in principal cities.



G-E Rodeo

TWO "COWBOYS" who are more at home with a kitchen range—George Leaf, sales manager of the B. K. Sweeney Co., Denver (left), and A. G. Chaffer, marketing manager of General Electric Co.'s household refrigerator dept.—look over the 65-piece cardboard rodeo to be used to promote G-E refrigerators and freezers. Rodeo will be given as a premium to children.

Sour Note

'Mystery Melody' Dealer Not In Harmony with Law, Witnesses Testify

MILWAUKEE — Hundred dollar prize certificates awarded by Bel Television here to winners of its "Mystery Melody" radio contest for use in purchasing merchandise are "deceptive" because the price of the merchandise thus offered has been raised by that amount, it was charged.

The hearing was being conducted by the Wisconsin Department of Agriculture and Markets. Representing the department was Leonard Bessman, chief of the anti-trust division of the state attorney general's office. The store was accused of violating fair trade practices in conducting the contest under which the first 20 persons identifying a tune are offered the merchandise certificates.

Among witnesses presented by Bessman were Harold Sampson, vice president of Sampson's Enterprises, Milwaukee appliance, radio, and TV chain, and Harry Hack, president of Hack's Furniture & Appliance Store. Sampson testified that TV sets offered by his stores for \$129.95 were priced at \$229.95 by Bel Television. Hack stated that a set his store was selling at \$159 carried a price of \$279.95 at Bel's.

Another witness was a woman who said she had purchased a washing machine for \$189.95 plus \$19.80 in installation charges, paying \$10 down. Two days later, she testified, the same make was offered at another store for \$89.95.



BUILT-IN Tyler case of Westerman Prescription House is equipped with rose-pink fluorescent lighting to attract attention to refrigerated biologicals.

Built-In Tyler Case with Pink Fluorescent Lighting Dramatizes Refrigerated Biologicals for Extra Profits

WACO, Texas—"Building in" a dairy display refrigerator when remodeling a prescription drugstore has brought a profitable extra volume in biological drugs for Westerman Prescription House here.

With his entire store interior done in lined green oak, Cecil Westerman has "dramatized" prescription service all the way, and he felt that his refrigerator installation should be "something special," too.

The box is a "two-way" Tyler model, with sliding glass doors at front and rear, which maintains a temperature of 35° to 38°. The interior is illuminated with rose-pink fluorescent lamps, providing a soft glow of pinkish light which contrasts effectively with the off-green tones of the surrounding woodwork.

Kept refrigerated are many biological products. One entire shelf is reserved for insulin.

Hussmann Refrigerator's Sales Volume For '51 Is Second Highest In History

ST. LOUIS—Hussmann Refrigerator Co. scored the second highest sales volume in its history during 1951 and should reach approximately the same level in 1952, W. B. McMillan, president, indicated recently in his annual report to stockholders. Sales for 1951 totaled \$19,606,799 on which a net income of \$1,420,714, or \$3.36 per share, was earned. This compared with sales of \$21,106,596 in 1950 and a net profit of \$1,978,552 or \$4.85 per share.

As for 1952, McMillan said that there has been an "upward trend" in orders for the company's products in the past two months. Sales of refrigeration equipment in connection with the defense program are expected to increase.

McMillan noted that the company is purchasing additional equipment for its new aircraft division. Production in this department should increase each month "with an anticipated fourth-quarter volume approximating our civilian production."

He reported that orders and shipments were large during the first half of 1951 but they dropped off in the second half due to government controls on building and uncertainties about price ceilings on foods. Variations in manufacturing caused higher costs than normal during the year.

McMillan said that availability of materials has not affected production and he did not expect it to because of the "essentiality of the products we manufacture."

Geo. Jones Resigns From Servel Post For Full-Time Campaign

EVANSVILLE, Ind.—Geo. S. Jones, Jr., vice president and assistant to the president, announces that his resignation from Servel, Inc. has been accepted by the management of Servel and is to become effective March 1.

Jones, a Republican, plans to devote his entire time to his candidacy for a seat in Congress from this district (as reported in the Feb. 18 issue of AIR CONDITIONING & REFRIGERATION NEWS).

He emphasizes the fact that this is a complete and final retirement from all connections with the Servel organization.

Such a drastic action on his part, after almost 19 years of service with Servel, is justified only by the seriousness with which he undertakes his campaign as a candidate and his determination to continue in public life if the people express approval, he indicated in making his announcement.

MacFarland Heads Delco Refrigeration Sales

DAYTON—J. N. Tilbrook, general sales manager of Delco Products Div., General Motors Corp., announced the appointment of Gordon F. MacFarland to the newly-created post of manager, refrigeration equipment sales.



Mr. MacFarland brings to Delco 25 years of experience in the refrigeration industry. He will be responsible for the sales of Delco's line of hermetic motors for sealed refrigeration compressors, and the related line of fan motors, relays, and other equipment handled by the firm.

Due to increasing defense activity, D. K. Tippy, who previously handled hermetic sales, will devote his time to Delco's major defense projects, Tilbrook said in making the announcement.

refrigeration tubing buy on every count

Choose Bundyweld and you buy tubing without compromise on features or performance. You buy the refrigeration industry's finest fabrication skills, devoted to making "impossible" parts possible and cutting costs at every turn. Look at all you buy in Bundyweld Tubing:

You buy tubing without compromise on features. Bundyweld is the only tubing double-walled from a single strip with beveled edges. Its extra-strong steel walls are copper-brazed through 360° of contact, copper-coated inside and out. Bundyweld is leakproof, with high bursting strength and high thermal conductivity.

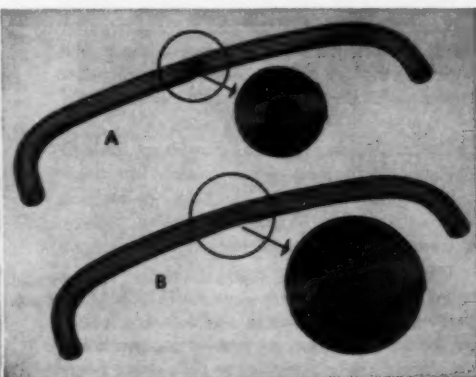
You buy trouble-free performance *proved* in millions of Bundyweld evaporator and condenser coils and refrigerant lines used in hundreds of

thousands of the finest refrigerators, home freezers and water coolers in the last 20 years.

You buy unsurpassed engineering skills. Many Bundy customers bring design problems to Bundy engineers; get simpler, cost-saving tubing-part designs and easier fabrication procedures—with no compromise in the part's function. Or if a customer wishes, Bundy will take on complete fabrication of a part—mass produce it, with an eye on accuracy and cost. Whether you need clean, bright tubing in lightweight, easy-handling lengths for fabrication yourself, whether you need design or fabrication help, or whether you need fast delivery of finished parts, Bundy is equipped to answer your needs.

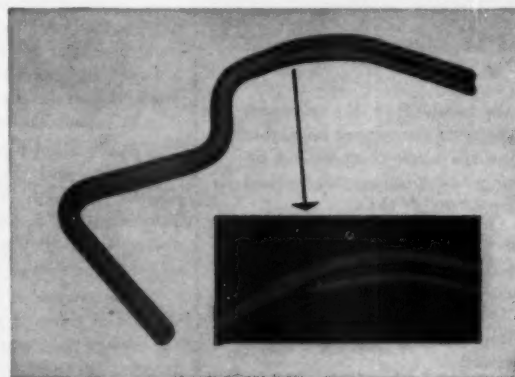
The world's finest refrigeration engineers, whether they think of cost or performance—or both—know there is no adequate substitute for Bundyweld Tubing—or Bundy skills.

Contact a Bundyweld Distributor (listed lower left), or write direct to Bundy Tubing Company, Detroit 14, Michigan



3. FABRICATION SAVINGS

You save because Bundy constantly examines and re-examines fabrication steps in search of lowered costs. Above: A) 7/16" O.D. connector tube with milled side hole necessitated burring and cleaning operations, was relatively expensive to produce. B) Bundy eliminated milling, burring, and cleaning operations; substituted simple lancing operation. Result: more parts per hour, lowered price to Bundy customer.



4. FABRICATION SAVINGS

Here is another fine example of Bundy skills at work to give a customer substantial cost reductions. Compressor exhaust tube (above) is now made with only two press operations to form double-barrel shape. Formerly, this part was made of three separate pieces of tube. Operations eliminated? Cutting and burring of two small tubes in double-barrel section, cutting and burring of large tube, assembly of three pieces, clinching, hard soldering.

SPECIALISTS in STAINLESS STEEL!

ROLL-FORMED AND STAMPED PRODUCTS

★
FUNCTIONAL and DECORATIVE
MOULDINGS
STAMPINGS
ASSEMBLIES

★
COMPLETE FACILITIES FOR
BUFFING
ELECTROLYTIC POLISHING
WELDING
FORMING

★
MORE THAN 30 YEARS' EXPERIENCE

★
SKILLED ENGINEERING SERVICE

JOHN LEES

Write for catalog and recommendations. Products manufactured to your specifications.

JOHN LEES Division of The SERRICK Corp.
Kilgore Avenue Muncie, Indiana

They'll Do It Every Time By Jimmy Hatlo



Do You Have 'Both Feet On The Ground'?

you get
double
protection
against moisture with
DRYSEAL
REFRIGERATION TUBE



Moisture hasn't a chance against Dryseal. It's double crimped that's why. A special, precise, mechanical double-crimp seal made at each end of the tube when it is manufactured keeps the inside dry as a bone and free from dirt. And, because of the way the seal is made, the diameter of the tube does not change. This permits it to pass through any opening large enough for the tube itself.

Dryseal is easy as pie to handle. Being dead-soft it

is easily bent with the hands. It is this same soft temper, and the ductility of the copper used, that makes Dryseal easy to flare for compression fittings without any danger of splitting. Economical tube sizes range from 1/8" to 3/4" O.D.

And, for your greater convenience we have just recently brought out Dryseal in a nifty-50 one-coil carton. This carton, which has been attractively designed for easy identification in stock, contains one 50-foot coil of Dryseal . . . is easier to handle, light weight, economical.

REVERE
COPPER AND BRASS INCORPORATED

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Mills, Baltimore, Md.; Chicago and Clinton, Ill.; Detroit, Mich.; Los Angeles and Riverside, Calif.; New Bedford, Mass.; Rome, N. Y.
Sales Offices in Principal Cities. Distributors Everywhere.
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"I have always felt that whatever the Divine Providence permitted to occur I was not too proud to report. The people are not served by pussyfooting, or by that sort of journalism in which nobody will ask who is the editor of a paper or the writer of an article, and nobody will care."—Charles A. Dana.

Hello, Suckers

ONE OF THE nation's foremost news magazines devoted a considerable piece in a recent issue to the fact that few in the retail field today seem to be asking—or expecting—John Q. Public to pay the list price for refrigerators and other similar merchandise.

Here's how *Time*, the weekly newsmagazine, reported the present state of the retail business:

"It's getting so that anyone is just a damned fool to buy anything at retail," said James Shea, a big Dallas electric-appliance distributor.

"The discount house is the biggest current phenomenon of U. S. merchandising. . . . To meet the 'I can get it for you wholesale' competition, many established dealers have had to cut their own prices. One Chicago department store recently cut \$335 General Electric refrigerators to \$229, just \$4 above actual cost.

"Said an executive of a Chicago merchants' association: 'I would estimate that 90% of nationally branded major appliances are sold below the list price.'"

The *Time* story emphasizes the discount house angle of the situation and retailers certainly have every right to ask that manufacturers and wholesalers clean out the channels of distribution and weed out the discount houses who brazenly brand themselves as such.

But, unfortunately, not too many "legitimate" retailers have kept their own skirts clean. When the least sign of sales resistance has shown up, they have been quick to take the easy way—the SUCKER way—to meet it. They slash prices instead of trying to sell value and their services.

There was a masterly summing up of the inherent danger in the "I've-got-a-deal" method of selling by Ed Taylor of Hotpoint in a recent letter to his dealers. Making the telling point that putting all sales on the "deal" basis is like starting to use dope, Taylor said:

"You can't build an industry by cutting prices. The automobile business—which is the only durable goods business larger than appliances—didn't grow to its present position of greatness by cutting prices.

"Price wars, like all wars, are destructive. There is no bottom to price. If you cut the price of a product, you'll always find someone who will cut deeper than you do. If you try to keep up, you'll go broke.

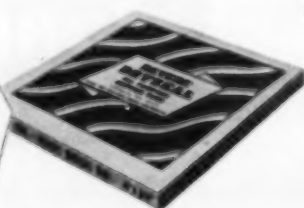
"Think of the public's reaction to an offer of \$100 trade-in for your old toaster (whether it works or not) on a new refrigerator. Does that build character for an industry? Certainly not. No wonder the public is becoming more and more skeptical of the list prices of appliances. These desperate price practices educate the people to look for 'deals' . . . to expect 'concessions' . . . and to insist on discounts.

"We'll admit that cut prices, fantastic premiums, exorbitant trade-in allowances, and the like, stimulate business—for a while. But these benefits are only temporary—merely 'shots in the arm'—palliatives. They're just as insidious—just as dangerous—as dope. They're tremendously costly—they're habit forming—and the need for increased dosages continues until they finally result in ruin.

"The answer is not in going the price route—but in SALESMANSHIP—and there is practically no salesmanship in the industry today. The things that made this industry as great as it is—demonstrations, stressing features, developing prospects, making home calls—have been almost completely abandoned. Instead of recognizing the problems that exist and facing up to them in a confident, aggressive, courageous manner, the habit is to ask, 'What's the deal?'

"We know that some manufacturers have substantial inventories of refrigerators, and that there may be another outbreak of price cutting and distress selling. But, we ask you—Why give your profits away now at the time when we're just going into the best refrigerator selling season of the year?"

NOW in the
NIFTY-50
one-coil
carton!



3 big talking points

to help you sell

RCA Room Air Conditioners

RCA Factory Service *

Only RCA offers coast-to-coast, direct-to-consumer Factory Service . . . positive assurance to your customers that every RCA Room Air Conditioner will be installed properly and continue to deliver dependable, care-free performance.



Top Cooling Capacity

Relief from summer heat is one of the major reasons why people buy air conditioners. In comparative tests among competitive units, the RCA "Heart-of-Cold" Compressor rated tops in efficient cooling capacity! 5-year warranty on the lifetime hermetically sealed cooling system.



Another thing customers want . . . plenty of air circulation! The RCA "Airflow" Grille was especially designed and engineered to provide widest, fullest air flow to all parts of the room . . . and only RCA has it!

* **P.S.** RCA Factory Service also means that you make full profit on every unit you sell. You are relieved of all responsibility. No installation problems! No parts inventory to carry! No service calls to eat into your profit!

RCA VICTOR DIVISION

RADIO CORPORATION OF AMERICA



RCA makes your Customer's home a better place to live!

Package Unit Design

Factors Affecting Future Trends of Larger Package Air Conditioners
Enumerated by Gonzalez of Airtemp at ASRE Conference

NEW ORLEANS—Design requirements for packaged air conditioning units of the future came up for plenty of discussion at the 47th annual ASRE meeting here when leading engineers aired their views on various aspects of the problem at a special conference.

Three major topics of discussion were room air conditioners, discussed by Paul B. Moore, assistant chief development engineer of York Corp.; commercial and industrial packaged units, by Ralph Gonzalez of Airtemp Div., Chrysler Corp.; and residential equipment, by W. A. Grant, director of research for Carrier Corp.

In addition, power supply and energy sources for such equipment were discussed by a utility representative—G. E. May, assistant chief engineer of New Orleans Public Service Co.

Actually, the conference, which was chairmanned by W. L. McGrath of Carrier, was opened by William B. Henderson, executive vice president of Air Conditioning and Refrigerating Machinery Association, who presented some interesting statistics on past production by the industry plus some encouraging views on the industry's future. Henderson's talk was published previously by the News.

(Presented here is the discussion on commercial and industrial packaged conditioners given by Gonzalez.)

sales. The other talks as well as some of the questions and answers which followed the formal discussions will be published in a future issue of the News.)

"In considering the future on packaged air conditioners, it is well to review quickly some of the past history of these units," said Gonzalez of Airtemp.

"The industry had long been convinced of the need for packaged air conditioners. The need for compactness, low cost, and reduction of field engineering on the small size projects was generally recognized and agreed upon in the late 1920's. However, it was in 1937 and 1938 that compact, low cost conditioners were produced by line production methods and widely distributed.

Applications Control Size of Units

"The trend toward 1,760 r.p.m. machines and sealed compressor and motor assemblies started also at about that time and contributed to the compactness feature of the new packaged air conditioners. The narrow depth and the vertical arrangement were originally selected to provide the maximum adaptability to installation directly in the space to be conditioned.

"The first mass-produced units were 3-hp. conditioners designed for

a depth of 19½ in. so that the conditioner could be installed in line with wall furniture in drugstores and clothing stores. This general arrangement and dimensional proportion has become a generally accepted standard.

"Although much of the distribution facilities in 1937 were tailored to the larger installations, there was already a small and growing nucleus of a distribution facility aimed primarily at the smaller tonnage installations. The packaged air conditioners lent great emphasis to the growth of this 'smaller project' distribution and also has been a major factor in promoting the present day acceptance of air conditioning. From small beginnings the packaged air conditioning industry had to develop load survey methods, sales methods, and installation procedures particularly adapted to the smaller tonnage projects.

"Now let's make a quick summary of some of the prime considerations that are facing the packaged air conditioning industry. First, let's talk about size, price, weight, and appearance. Judging from the lack of space usually made available for air conditioning, there is no likelihood of making the units too small," Gonzalez said.

"Their size can be helped in some indirect ways such as making all service access openings at the front.



Elimination of side or rear access requirement reduces the installation space. Making it possible to take the water and drain connections through the bottom of the unit is another method of reducing over-all requirements for some installations.

"The development of different refrigerants, increased compressor speed, and more compact heat transfer elements are some of the means that the industry is currently considering to hold size, price, and weight in line and to extend upward the capacity available in a single package.

What Is Practical Limit On Size of Self-Contained Air Conditioners?

"A question frequently asked is: 'What is the upper practical limit of size of a self-contained air conditioner?' The answer to that question has been changing every year. The practical size depends both on what the industry can produce and on what the purchasers and the distributing industry are prepared to take and handle," he suggested.

"One frequently used 'rule of thumb' for the size of a self-contained conditioner has been the size that can be handled through a 30-in. wide by 6-ft. 6-in. door.

"A different consideration that must be weighed by the manufacturer is the fact that each larger size unit produced reduces the volume demand for the smaller units. There is the possibility that we may eventually make so many sizes that we will not have production quantity volume in any size—but this still appears to be a possibility rather than an immediate hazard.

"The appearance factor has been the subject of study and experimentation out of all proportion to the results so far obtained. The reasonably neat enclosures are still obviously enclosures of mechanical equipment. Improved appearance would certainly encourage an increase in the number of installations directly in the conditioned space.

"There are other considerations such as following:

"1. Humidity control, with capacity reduction and reheat options, is definitely desirable for many applications and in some areas of the country. It is well to recognize that humidity control is less of a problem in the low summer humidity areas. However, the high summer humidity areas are so important, marketwise, that the incorporation of some form of humidity control as a standard or optional feature can be expected to increase.

Noise Level Will

Graduate with Size

"2. Noise level can be expected to graduate with size. Economy suggests designing for a noise level that will suit most applications. This procedure requires that sound deadening be practiced in the field for those minority applications where the sound level of the standard units will be unacceptable. Much research is being directed toward sound problems.

"Manufacturers can be expected to take advantage of such new developments as may occur. However, an increasing field awareness of providing special sound treatment for the very quiet projects is highly desirable. This means that the final responsibility for an acceptable installation sound level rests with the field application engineer and the installer.

"3. Progress in reliability is still a large requirement. Involved in this broad consideration are many internal improvements of design and manufacturing practice. Improved motor protection and reduced refrigerant leakage are items high on this part of the agenda. The motors in sealed refrigeration units are subject to a different set of conditions than the normal 'ambient' conditions for which general purpose motor controls have been developed. There is a very definite need for reliable motor protection means for the specific operating circumstances of a sealed compressor motor," emphasized Gonzalez.

"4. Along with the development of the self-contained conditioners, the industry has also developed application methods and procedures tailored to these conditioners. There is much more work to be accomplished in this direction. The self-contained, factory assembled refrigerant cycle is very versatile, but it does not eliminate all field engineering and application problems.

"These self-contained conditioners are frequently used in applications requiring the minimum of field engineering and installation. These same conditioners are also used in installations requiring extensive field engineering and extensive planning and installation 'know-how'.

"There is a need for a better definition between the areas of these simple and complex projects involving these self-contained air conditioners. We must recognize that the properly qualified distribution facilities will provide better installations and improved service facilities for each type of project.

"5. The problem of heat rejection is a variable one. In some areas, even major size installations of over a 100 tons capacity may use city water. In other areas, well water provides the most economical heat rejection. However, in all areas, the warning signals are in substantial evidence that heat rejection from air conditioning systems will require increasing attention in the future.

"Cooling towers of suitable capacity, size, price, weight, appearance, and sound level are required, and developments along this line are in progress. There are also the possibilities of heat rejection by direct air condensing which are still in the embryo stage for the usual commercial application of self-contained conditioners.

Power Supply, Characteristics Cannot Be Overemphasized

"6. The importance of power distribution facilities and the impact of power supply characteristics on the proper operation of self-contained conditioners cannot be overemphasized. The over-riding circumstances of war and defense demands have caused and are causing abnormal conditions in power availability and in power supply characteristics. Refrigerating equipment can and does consistently load its motors close to the maximum capacity.

"It is to be expected that motor difficulty due to variations in power supply characteristics will be noticed prominently on such equipment. In addition to these problems, our industry has a selling job to perform in securing increases and extensions to power supply to permit increasing and wider distribution of self-contained conditioners.

"7. The installations of self-contained conditioners frequently provide auxiliary services of year-round ventilation and heating services. Continuous improvement in the techniques of introducing outside air so that proper filtering and treating of ventilation air will be obtained is a major problem in most applications.

"8. Better and more uniform operation by the owners and operators of air conditioning equipment requires the continual teamwork of all segments of the industry. The factories can produce more reliable equipment with better controls. The distribution people can make better installations and provide improved maintenance and service facilities. The owners and operators can be educated to use the equipment to produce comfort conditions rather than temperatures and air movement that are excessive for comfort."

No. 1 IMPORTANCE

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Be Sure it has a **CLEANABLE** Condenser



Now that almost all leading manufacturers are recognizing the demand for a cleanability feature in their units—you needn't settle for anything less than a **CLEANABLE** water-cooled condenser. For regardless of water conditions or length of service, you can always count on restoring new-unit efficiency by the simple use of a spiral cleaning tool in these new HM Cleanable models. The tool cleans them *mechanically*—thoroughly removing ALL the corrosive material that accumulates on the water tube interiors. Remember, too, in all sizes, economical performance is now enhanced by low initial purchase cost, made possible by the huge productive capacity at the new Halstead & Mitchell condenser plant.

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Brass Headers Machined & Bressed

Capacities— $\frac{1}{2}$ thru 25 H. P.
All Water-cooled, Double tube, Counter-flow

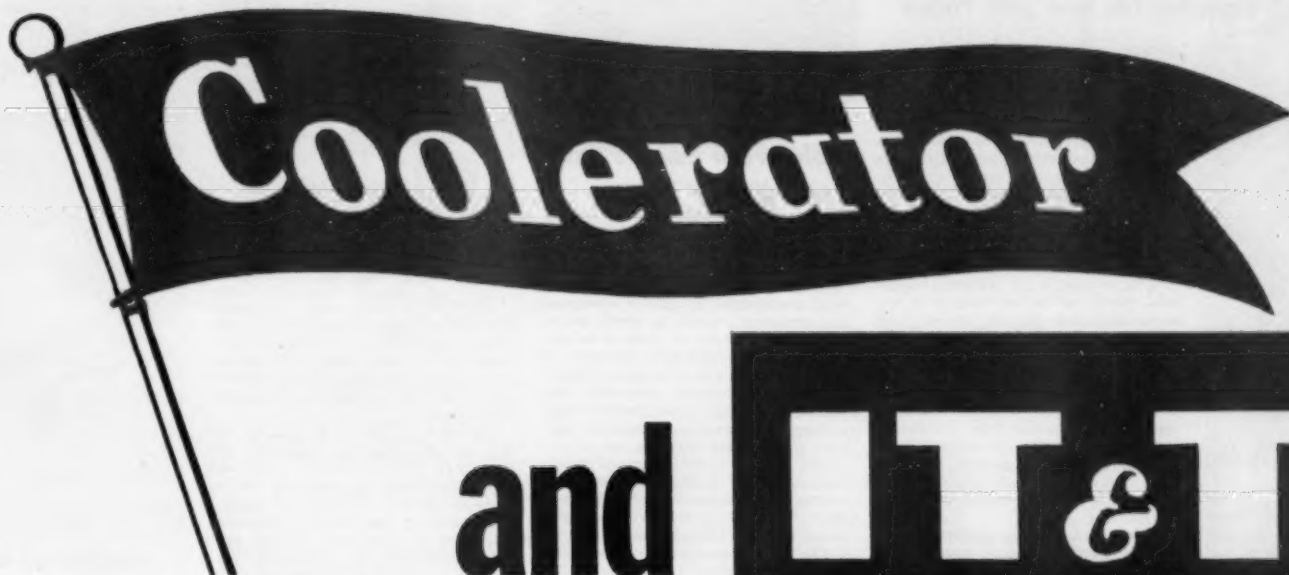
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**Packaged Air
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2 to 15 Tons
Condensing Units
1/4 hp. to 40 hp.**

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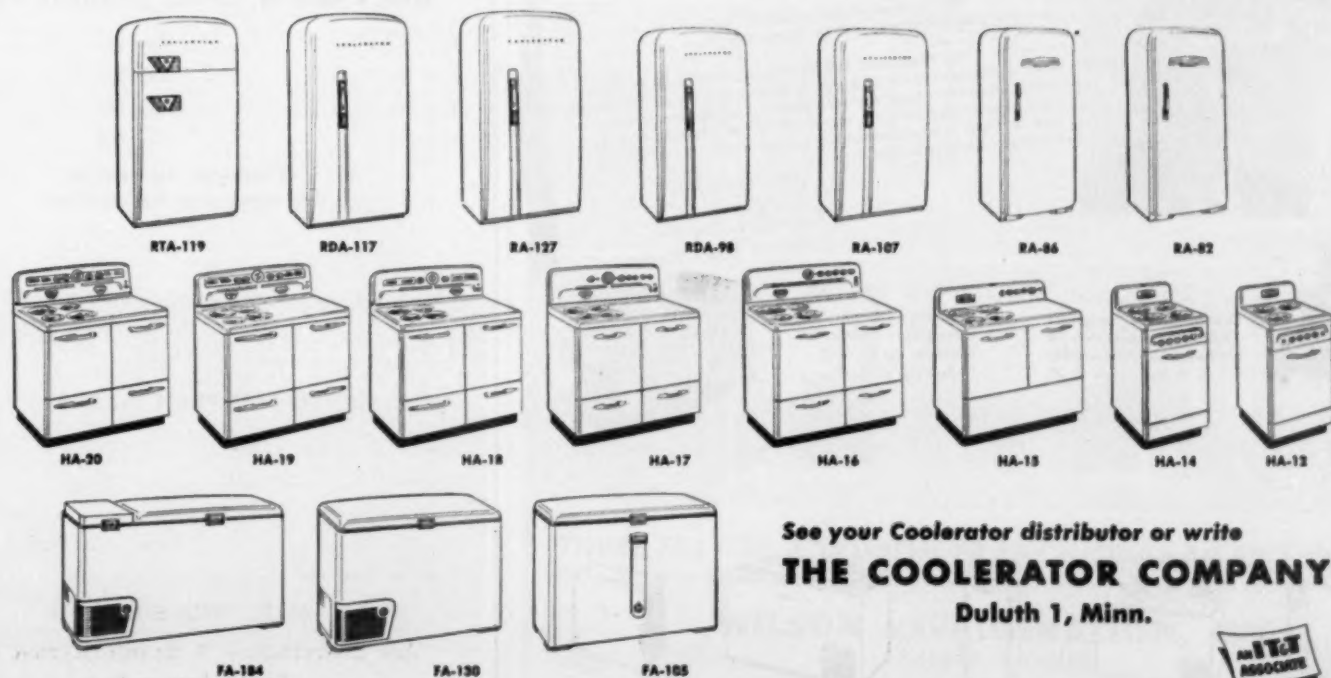
- NEW!** Remodeled, expanded, streamlined plant facilities.
- NEW!** *Perfected* Automatic Defrost in a completely *new* line of refrigerators designed for today's market.
- NEW!** Greatly improved line of ranges and freezers that have more "sell" than ever before.
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Watch for powerful advertising at the peak of the refrigerator season . . . in

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LOOK AT THIS GREAT NEW LINE FOR 1952. CHOOSE COOLERATOR—AND SELL THE FINEST!



See your Coolerator distributor or write
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What's New

When requesting further information on new products, please use "Information Center" form.

High-Current Volt-Ammeter Fits Into Coat Pocket



KEY NO. B-310

LYNBROOK, N. Y.—A new high-current "Amprobe" volt-ammeter that measures up to 1,200 amperes, yet can be carried in the coat pocket, has been introduced by Pyramid Instrument Corp. here.

Like its predecessors, the Amprobe model 1200 is of the "snap-around" type, which measures current "in-

stantly without being connected to the conductor," the company said. "The reading can therefore be taken without interrupting the circuit or shutting down equipment."

The Amprobe 1200 is claimed to have six important engineering and design features: It uses a newly-developed doughnut-type transformer which reportedly "eliminates for all practical purposes the factor of error due to position of conductor within the probe jaws."

It incorporates six ammeter ranges and three volt-meter ranges in one instrument: 0-15/60/150/300/600/1200 amperes a.c., and 0-150/300/600 volts a.c.

The voltage test leads are equipped with the new Amprobe safety-type plug which automatically insulates itself when removed from the meter. Probe jaws are completely insulated down into the sockets, to eliminate the danger of shorts while working in crowded switch boxes and distributing panels.

A wide-angle, high-visibility window is another feature emphasized.

Measuring 8½ in. long, and weighing 15½ oz., the Amprobe 1200 can be carried in the coat pocket, on the belt, or in the brief case.

Price is \$67.50, including case and voltage test leads.



Frozen Food Case Designed For 'Modest' Dealers

KEY NO. B-311

NEW YORK CITY—Ace Cabinet Corp. has announced a new frozen food merchandising cabinet, designed for retailers "with modest frozen food sales," which is claimed to embody "all the desirable features of the expensive, yet is budget priced."

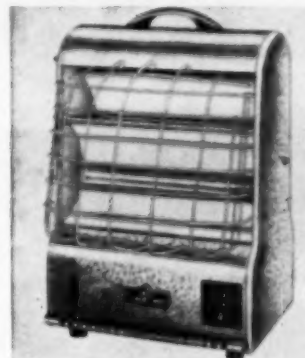
Designated model OG-15F, the cabinet features front visibility and a large angle mirror in the back that fully reflects the interior.

The entire unit, including superstructure, is made of one-piece, welded steel, trimmed with stainless steel. The finish is a high gloss white enamel, double baked for durability.

The condensing unit is hermetically sealed with a special "glide-out" feature for cleaning or servicing.

The case measures 65½ in. long by 30½ in. wide by 59½ in. high, and holds over 500 packages.

Portable Heater Provides Automatic Control



KEY NO. B-312

BUFFALO—The new, automatic Fan-Glo portable Heetaire with automatic thermostatic control is introduced in a new two-color catalog published by Markel Electric Products, Inc. and La Salle Products, Inc. of Buffalo.

Included in this new catalog are the manual Fan-Glo Heetaire, the two heat Hi-Lo Heetaire, and the Kool-N-Heetaire—a complete line of portable electric heaters and fans.

All four of the portable Heetaires displayed in this new catalog feature fan-forced air, induction type motors for 50 to 60 cycles, a.c. current, freedom from radio and television interference, baked enamel finish, and a year's guarantee.

The Fan-Glo Heetaire gives two kinds of heat—scientifically reflected infrared rays and fan-forced heated air. Patented Neo-Glo elements produce heat of equal intensity at all points.

One dial automatically controls the automatic Fan-Glo Heetaire ("T" models) to produce and maintain a temperature from 55° F. to 85° F., turning itself on and off as necessary. Just turn the dial to the zone of temperature wanted and flip the switch to "ON."

There are two models of the Fan-Glo Heetaire, one of 1,320 (Model 195) watts, the other of 1,650 watts (Model 196).

The two-heat Hi-Lo Heetaires (Series 140) deliver two intensities of fan-forced heat. The user is offered a choice of low heat—1,000

watts in model 146 and 800 watts in model 145—or high heat—1,650 and 1,320 watts, respectively. These same two models are also offered in just one heat with wattage of 1,320.

The Kool-N-Heetaire (Series 266) is a combination cooling and heating fan. It is controlled by two switches, utilizes 1,650 watts, and has a four-bladed high speed 8-in. fan. It produces fan-forced heated air or fan-forced cool air through a scientifically designed safety grille.

'Thaw Alarm' Sounds Buzzer, Flashes Light



KEY NO. B-313

CINCINNATI—A home freezer "Thaw Alarm" that sounds a buzzer and flashes a light when the temperature inside the freezer rises above 15° F. has been introduced by Sperti-Parady, Inc. here.

The Thaw Alarm works from freezer inside temperatures and has no connection with electrical current, whatsoever, declares A. W. Fischer, general manager. The thermostat cord is of the flat coaxial cable type which feeds over the rim of the box and under the lid gasket allowing the thermostat to hang freely in the freezer compartment space.

The device operates from two type D dry flashlight batteries. The alarm signal will sound continuously for over three days, Fischer said.

A 4-ft. thermostat cord connects the Cutler-Hammer thermostat with the signal device.

Guaranteed for one year, the model 841-7 is priced at \$9.95 less batteries.

Read Why This Successful New Hotel Uses Kelvinator Condensing Units



Frederick Martin Hotel
Moorhead, Minnesota

Ethan S. Brown,
Manager



In One Year, The Frederick Martin Won National Recognition: Read How Its Refrigeration Is Taken Care Of, By Kelvinator!

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September 20, 1951

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Detroit 32, Michigan

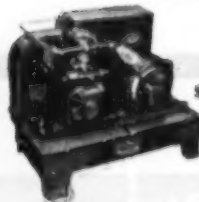
Gentlemen:

Newsweek magazine called us "one of America's finest small town hotels."

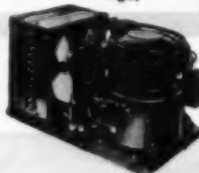
We're proud of that comment and pleased too, that our guests seem to feel the same way about us.

Our equipment and facilities have helped us earn this reputation and we're happy to report that the 16 Kelvinator units installed to meet our refrigeration needs have given us very satisfactory service. As we enter our second year, we look forward to a continuance of further efficient, dependable and economical operation.

Very truly yours,
Ethan S. Brown
Ethan S. Brown, Manager



See the complete range of Kelvinator open-type condensing units—from ¼ H.P. to 5 H.P.



See the selection of 16 Kelvinator hermetic models, up to and including ½ H.P.



KELVINATOR BEVERAGE COOLERS



KELVINATOR FROZEN FOOD MERCHANDISERS



KELVINATOR WATER COOLERS



KELVINATOR ICE CREAM CABINETS



KELVINATOR AIR DRYERS

Information Center

For more information on What's New products, current literature and catalogs available, equipment advertised in AIR CONDITIONING & REFRIGERATION NEWS use Key Numbers where designated or specify products advertised and we'll see that you receive this information promptly.

What's New or Current Literature Available

Key No. Key No.
Key No. Key No.
Key No. Key No.
Key No. Key No.

Products Advertised
(list name, page, and issue date)

(PLEASE PRINT PLAINLY)

Name Title
Company
Street
City Zone State
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DETROIT 26, MICHIGAN

What's New (Cont.)

Peerless Panel Cooler Designed for Low-Height Areas



MEL KNIGHT of Peerless of America, Inc. shows compact design of new Peerless panel cooler for beverage coolers, reach-ins, etc. to Betty Thomas. Unit is available in five models of varying capacity.

KEY NO. B-314

CHICAGO—A panel cooler designed to fit into the low height beverage cooler, backbar, reach-in refrigerator, and other fixtures of this general type is manufactured by Peerless of America here.

The cooler is non-ferrous throughout, fabricated with aluminum casings and brackets. It employs the Peerless coil with aluminum fins on copper tube and lifetime oilless type motor.

The cooler is made in five models,

ranging in capacity from 1,700 to 3,500 B.t.u. per hour at 20° T.D. The two smallest models use $\frac{1}{2}$ -hp. motors and 8-in. fans while the larger three use $\frac{1}{4}$ -hp. motors with 10-in. fans. The fans are rated at from 125 to 250 c.f.m.

The three larger units are deluxe models and are furnished with back plate and rubber mounting grommets. Drip pans are available on special order with these models at \$5 extra cost.

All connections are $\frac{1}{2}$ -in. S.A.E. Flare.

coolers, has been developed by the Uni-Fridge Corp. here.

To install the refrigeration panel, a section 18 in. square near the top of the cooler wall is removed and the unit is then sealed into this opening. Plugging the cord into a standard 110-volt electric outlet completes the installation.

The condensing unit of the Uni-Fridge panel extends outside of the walk-in cooler with the refrigerating blower on the inside of the cooler wall.

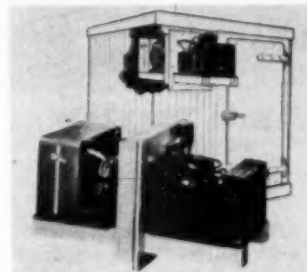
Expansion is accomplished with an expansion valve which automatically compensates for variation in cooling needs. Coil and compressor sizes are engineered to be self-defrosting.

The Uni-Fridge panel is designed for refrigeration of beverages, produce, meats, and other perishables.

Test results obtained from 24 Uni-Fridge panels during three years of continuous operation in the field have proved them to be as efficient as any remote installation, the manufacturer states. Substantial savings on equipment cost and installation charges are other benefits claimed.

Uni-Fridge refrigeration panels are made in $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$, and 1-hp. models. Each panel carries a one-year unconditional guarantee with complete replacement if desired. Service parts are obtained locally throughout the United States.

Uni-Fridge Panel Unit Developed for Walk-Ins



KEY NO. B-315

MINNEAPOLIS—The "Uni-Fridge" refrigeration panel, a self-contained unit which requires only two hours for installation in most walk-in

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"JOB TAILORED" means money saved

• Your cold plate dollar goes further when you specify DEAN because you eliminate waste! You get a plate in the *exact* size you need . . . not one that is almost right, but a plate that accurately meets your specifications. You name the size—you name the shape . . . we make it!

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Using DEAN "job tailored" cold plates means dollars in your pocket on every job. Try them!

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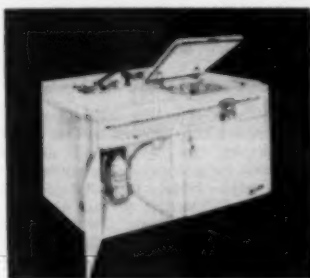
Get the details on DEAN Cold Plates for ice cream cabinets, locker plants, soda fountains, farm milk coolers, farm freeze cabinets, low temperature test rooms, frozen food refrigerators, window displays, food counters, refrigerated transportation and subzero applications for industrial chilling.

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ANY SHAPE
MOST METALS

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PRODUCTS, INCORPORATED
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Sterling 9-5400



New Dishwashers Offer 'Hydro-Electric' Control

KEY NO. B-316

WARREN, Ohio — Youngstown Kitchens' "Jet-Tower" dishwashers for 1952 feature "Hydro-Electric" control, an operating system that employs both electricity and water pressure to insure positive action in each phase of the 9 $\frac{1}{4}$ -minute wash-rinse cycle.

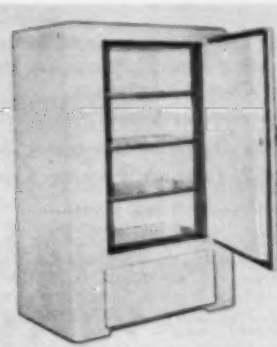
Horizontal embossings across the front panel of both the 48-in. electric sink and the 27-in. dishwasher give the units a lower, streamlined appearance. The porcelain enameled lid is flat, providing extra work surface. The rinse spray is extra.

The upper racking basket holds up to 50% more ware, including stem ware, ash trays, coasters, and other small or odd-shaped pieces. A cutlery basket is vinyl covered, curved to hang on the outer rim of the rack, holds service for six.

Engineering improvements include a simplified, single cam timer, carbon sealed pump, solenoid operated drain, harnessed wiring, and no-splash air

gap located above flood level.

The electric sink may be plumbed to a single drain where the code permits, or to a double drain. For installation and service, the undersink compartment housing the mechanism is larger.



Wilson Upright Freezer Holds 900 Lbs. of Food

KEY NO. B-317

SMYRNA, Dela.—A new upright home freezer that will store from 800 to 900 lbs. of frozen foods has been introduced by Wilson Refrigeration, Inc. here.

Each of the shelves in the self-contained freezer is a freezer plate and may be used for contact freezing of meats, fruits, or vegetables. An extra freezer plate is located in the ceiling for equal distribution of cold.

The box is of welded steel construction finished in white enamel.

for more
Ice Maker
SALES

... FILTRINE
"Taste-Master"
Demineralizer
in the water line

Cuts Service
No Tastes
Clear Ice
Fits All Makes
Small Cost

Crystal ice . . . without sludge-forming rust, sediment, mineral residue . . . chlorine taste . . . "milkiness." Ends major source of service calls. Write for new literature.

Filtrine
Water Filters and Filters for 40 Years
FILTRINE MANUFACTURING CO.
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Redmond MICROMOTORS

Prompt shipment!

74 different models in stock

FACTORY DISTRIBUTORS

CYCLO-FREEZ CORP.

MARVIN L. "FERGIE" FERGUSON

2120 S. Lyndale, Dept. A, Mpls. 5, Minn.

Here's what we mean when we say

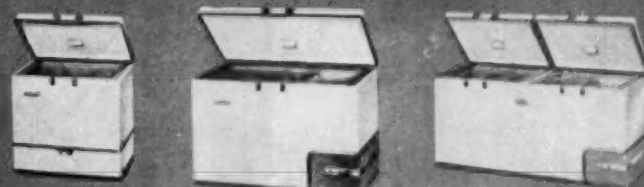
WILSON

is the **COMPLETE FREEZER LINE**

THERE'S A WILSON FREEZER FOR EVERY NEED

SELF-CONTAINED CHEST FREEZERS

3 popular sizes



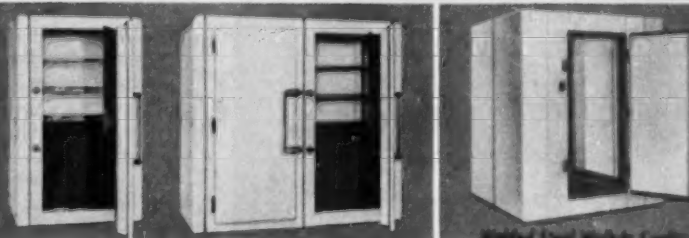
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2 large-capacity
space-saving models



REMOTE COMPRESSOR- UNIT UPRIGHT FREEZERS

3 capacities
30, 60, 90 cu. ft.



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Write, wire, or phone for complete information today. A few valuable territories still open.

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SMYRNA, DELAWARE

HOME FREEZERS • FARM MILK COOLERS • COMMERCIAL REFRIGERATION



Current LITERATURE available

To obtain further information on the literature listed below, please refer to key number preceding listing. Please use the "Information Center" form on "What's New" page.

EET Publishes Installation Data on Ranges, Washers

KEY NO. N-310

NEW YORK CITY—Two new sections to its "Domestic Appliance Installation Manual" have recently been added by the Edison Electric Institute. Published as separate booklets, they are the "Electric Range Section" and the "Electric Laundry Equipment Section."

Both sections were prepared by the wiring and specifications committee of the EET and deal primarily with wiring problems.

The electric range section deals mainly with the changing of an existing inadequate service for the accommodation of an electric range and the installation of range circuits in new construction. It is priced at 50 cents a copy.

The electric laundry equipment section treats the electrical wiring and installation requirements without going into finer details of equipment planning, wall surface color schemes, or cabinet construction. Its price is 35 cents per copy.

Mills Bulletin Illustrates 1952 Counter Freezer Line

KEY NO. N-311

CHICAGO—Mills Industries, Inc. has recently issued Bulletin 752 illustrating and describing its 1952 line of counter freezers. Charts show profits per gallon of mix sold and monthly custard profits. Both the new hopper model and pump model with side cabinet are described and illustrated in the full-color folder.

Traulsen Stainless Steel Bakery Freezers Described

KEY NO. N-312

LONG ISLAND CITY, N. Y.—Traulsen & Co., Inc. has recently released a four-page folder describing its new stainless steel bakery freezers.

The folder shows how the retail baker can increase his profit through use of a Traulsen bakery freezer by eliminating sales, reducing labor costs, and increasing sales. General specifications data on the line is given.

Magazine Tells How To Metallize Worn Parts

KEY NO. N-313

CHICAGO—A bi-monthly publication called the "Metallizer" is being issued by the Metallizing Co. of America here to provide maintenance men with latest information and methods for saving metals and machines and increasing production by reclaiming worn parts through the use of metallizing.

The 16-page pocket-size book contains stories and pictures on the advantages of metallizing in the textile industry, metallizing worn valve stems, metal spraying with the Mogul Gun, and others.

New Ideas In Home Layout Sketched by Carrier Book

KEY NO. N-314

SYRACUSE, N. Y.—A new book, "How to Have a Carrier Weathermaker Home," describing "dramatic and economical" new home layout ideas now made possible by positive residential comfort control has been released by Carrier Corp.

Pointing out how home design has lagged behind other changes in American life, the book outlines "a new way of planning a home from the inside out, with complete freedom from many old technological restrictions," Carrier said.

"Windows that open are no longer required for summer comfort," the book demonstrates. "Window and floor plan arrangement no longer need be designed for cross-ventilation. Windows can be placed wherever desired for view or privacy, for living

or furniture arrangement, and for the most favorable lighting and exposure. They can be equipped with fixed sash, eliminating screens and storm windows.

"With cross-ventilation of no further concern, houses can be laid out on a more compact floor plan which provides more living space in proportion to expensive outside wall area. Interior partitions and doors no longer need be planned to permit the movement of air through the house, and can be designed to fit convenience, giving an effect of spaciousness or privacy."

"Hero" of the piece is the new Carrier Weathermaker air conditioner, which can be shifted instantly from heating to cooling by a simple control.

The home design changes made possible by the Weathermaker can frequently result in savings almost sufficient to cover the additional cost beyond the normal hot air heating system, the book states.

Diebold's Record System Answers Service Queries

KEY NO. N-315

CANTON, Ohio—Information on its service record system devised to answer all service questions "quickly and completely" is available from Diebold, Inc. here. Here's how the system works, according to the company:

A record card is kept for each unit serviced, each record being a history of the work done. The same card can be used for inventory control, as a sales record, as a prospect record, or as a ledger account card for service.

These cards are housed in a handy visible desk tray from which they can be quickly extracted by the clerk while talking on the phone and posted with necessary information. Cards can be added or removed from anywhere in the tray without adjustment. An automatic "V" makes each record fully readable without removing it from the file.

Records are punched with three keyhole slots and mounted on a bar in the desk tray. By refiling on the right or left hole, the card can be offset to show at a glance service jobs that are pending, accounts receivable, or any other current status of records desired.

Up to 810 records can be filed in each portable "Cardineer" desk tray.

Electrical Data Book Is Revised by Westinghouse

KEY NO. N-316

PITTSBURGH—A new 330-page revised edition of the architect and engineers electrical data book is now available from the Westinghouse Electric Corp.

The book has been revised to keep up to date with the rapidly growing construction business. It includes information on new equipment and new methods of using this equipment as well as an entire new section on power distribution.

Designated B-2161-E, the book is divided into the three general equipment categories of power plant, electrical distribution, and utilization and accessory equipment with one section on engineering data. Each piece of apparatus contained in the equipment categories is described with illustrations, charts, and technical data. The application, features, selection, dimensions, and specifications of all equipment is given.

The engineering data section deals mainly with product application and the design of distribution systems.

All-State Folder Features Solders for Work on Copper

KEY NO. N-317

WHITE PLAINS, N. Y.—Two aluminum solders that are especially proficient in joining copper to aluminum or other metals and 10 rods and electrodes for work on copper and copper-bearing alloys with torch, soldering iron, and arc, are featured in an illustrated folder just released by All-State Welding Alloys Co., Inc.

This booklet is titled "How to Use and Apply All-State Alloys and Fluxes for Welding, Brazing and Soldering Copper and Copper-Bearing Alloys."

Contained in the 6-page folder are complete instructions for use, techniques of application, and description of the properties of the alloys. Copies of this folder, measuring 3½ by 6½ in., may be obtained from All-State distributors throughout the country or on request to the company.

JUST ASK US!

Turn to "What's New" Page for useful information on new products.

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All sizes and types... standard models... experienced engineers fit unit to your job... modern plant assures low cost, high quality.

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Specialists in
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Stores More in
Less Space...
Cools Faster!

Speed-Freeze

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Would you like to sell an idea?

The product is the Carrier Weathermaker Air Conditioner. The idea is the Carrier Weathermaker Home... a new kind of home... built around air conditioning.



It's a new idea

The Weathermaker Home is more than an air conditioned house. It's a house that puts air conditioning to work! It's a house that's designed around air conditioning. So that the air conditioning pays for itself out of savings. A more compact floor plan. No screens or storm sash. No attic fans or ventilating louvers.



It's a cinch to sell

Who are you selling? Architects, builders, and anybody who wants a new house. How do you reach them? Well, we're talking to them in a dozen national publications and we're putting a pretty wonderful 32-page book in their hands at the drop of a postal. So we don't lack for leads. And when it comes to selling, you've got something people want.



And there are extras

And it's not all residential, because there's also a ready-made commercial market for this Carrier Weathermaker Air Conditioner that heats and cools. It's a natural for better shops and offices where they want the air conditioner tucked out of sight and are willing to pay extra for ducts. And where water is a problem you've got that wonderful Carrier Cooling Tower that runs on its own water power. To top it off, these air conditioners carry the Carrier name. The same name just about everybody has seen on Carrier Room Air Conditioners and Carrier Weathermaker self-contained Air Conditioners.

Carrier

CARRIER CORPORATION
310 S. Geddes Street, Syracuse 1, N. Y.
Please send me "How to Have a Carrier Weathermaker Home."

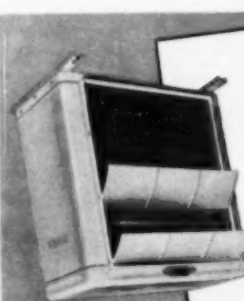
Name

Street

City

State

AIR CONDITIONING & REFRIGERATION



Kay-Tee
UNIT COOLER
by
KRAMER

offers more BTU's for less money as a result of extensive engineering advances and the development of KRAMER'S newly patented fin and tube construction.

Write for
Catalog K-225

In seven sizes,
2,500 to 12,000 BTU's per hour

KRAMER TRENTON CO. - Trenton 5, N. J.

Smoothness of Tube Found To Be Big Factor In Boiling Coefficients of Refrigerants

DETROIT—Smoothness of the tube was cited as an important factor affecting the boiling coefficients of refrigerants by Prof. Donald L. Katz, chairman of the Department of Chemical and Metallurgical Engineering at the University of Michigan, in a recent talk before the Detroit ASRE section.

Under the title of "Boiling Coefficients for Refrigerants Outside Plain and Finned Tubes," Prof. Katz somewhat briefly reviewed several research projects along these lines which have been conducted at the university over the past years under a fellowship set up by Wolverine Tube Div.

"The matter of surface is a very important thing affecting the boiling coefficient," he emphasized. "Even the fluid itself conditions the surface."

"Perhaps one of the most important factors affecting the boiling coefficient is the degree of smoothness of the tube, our tests indicate," Prof. Katz said. "Finned tubes definitely gave better results, but perhaps we have changed the surface of the tube in the finning operation. The 'roughness' of the fin may have accounted for the increase in boiling coefficient."

By "roughness" he did not mean that the surface of the tube or fins was discernibly rougher in the one than in the other, he explained. In fact, tubes of commercial grades were employed for most of the tests.

"And where the tube surface was roughened deliberately to the point where its surface is visibly different, no such increase in the boiling coefficient was observed," he stated.

Remarkably different results were obtained, however, when a flat piece of copper was specially plated and brought to an extreme degree of smoothness. The boiling coefficient was far less than for a copper tube of standard smoothness.

It was also observed, he said, that the boiling coefficient drops "as much as half" as time goes on, apparently because the surface condition of the tube is changed.

Most of the tests were conducted by boiling the refrigerant in a chiller containing horizontal plain or finned tubes through which water was flow-

ing. The refrigerants studied included "Freon-12," methyl chloride, sulphur dioxide, and propane.

The setup, of course, provided the controls and instrumentation necessary to obtain the test data desired.

One of the conclusions resulting from the tests, said Prof. Katz, was that "in all cases the boiling coefficients per sq. ft. of outside surface were greater for the finned tubes than for the plain tubes, but at higher temperature differences they appear to converge or cross."

The greatest differences between the finned and plain tube results were found with "Freon-12" while propane showed the least differences.

"Finned tubes have their maximum advantage at low temperature differences," he explained. "The boiling coefficient for 'Freon-12' reaches its maximum at a temperature difference of 12° to 13° with the finned tube, beyond which it levels or falls off."

G-E Suppliers Will Meet In Louisville March 20-21

LOUISVILLE, Ky.—Some 400 to 500 suppliers of materials used by the General Electric Co. in its manufacture of major household appliances are expected to attend a conference and products parts exhibit sponsored by G-E in Louisville, March 20 and 21.

C. P. Fisher, Jr., manager of materials and purchasing for the company's major appliance division, said the meeting had been arranged to acquaint suppliers with the long-range production materials requirements of the division.

All component parts of major appliances manufactured by General Electric, together with the appliances themselves, will be on display. Division administrative, sales, engineering, manufacturing, and product planning executives, headed by General Manager Clarence H. Linder, will speak and be available for questions.

The program will include a tour of the new multi-million dollar "Appliance Park" project now under construction at nearby Buechel where, ultimately, General Electric will produce its major appliances.

Liquid Carbonic Meetings Will Aid Servicemen In Installation, Repair

CHICAGO—Liquid Carbonic Corp. is holding a series of service meetings this spring to acquaint servicemen with the installation, operation, and servicing of the new line of Liquid Carbonic soda fountain equipment and the Liquid automatic carbonator.

All meetings will be evening affairs, scheduled to start at 7:30 p.m. Following is the schedule announced by C. Merryman, general service manager of the Soda Fountain Div. of Liquid Carbonic Corp.:

March 2, St. Louis, Liquid Carbonic Corp., 3417 Bernard St. March 3, Kansas City, Liquid Carbonic Corp., 1339 Liberty St. March 5, Atlanta, Ga., Atlanta Biltmore hotel. March 7, Wichita, Kans., Broadview hotel. March 7, Birmingham, Ala., Thomas Jefferson hotel. March 10, Oklahoma City, Oklahoma Biltmore hotel. March 10, New Orleans, Jung hotel. March 12, Dallas, Thomas Jefferson hotel. March 14, Houston, Rice hotel. March 28, Buffalo, Alex Miller Co., 522 Broadway.

April 1, Rochester, N. Y., Cable Wiedemer, Inc., 138 State St. April 2, Syracuse, N. Y., Smith Restaurant Supply Co., 500 Erie Blvd., East. April 4, Albany, N. Y., Lewis Equipment Co., 480 North Pearl St. April 7, New York City, Universal Soda Fountain Co., 443 E. 149th St. April 9, Boston, Soda Fountains, Inc., 136 Broadway. April 11, Philadelphia, J. M. Holmwood & Co., 5 E. Montgomery Ave., Bala Cynwyd, Pa. April 14, Baltimore, Liquid Carbonic Corp., 1300 Guilford Ave. April 16, Richmond, Va., Owens & Minor Drug Co., 1000 E. Cary St.

New Jewelry Store Cooled

CHARLOTTE, N. C.—Air conditioned, Ben Gurr Jewelers has opened on North Tryon St.



"Slants on Service" is a "package" devised by the NEWS to meet the needs of its busy readers in the service and contracting business.

Pipe Covering Vaporproofed To Counteract Condensation

Excessive condensation can rot insulation on chilled water pipes, as it did on the drinking water lines at a Pittsburgh hotel. Harmful effects of such condensation have been eliminated by a complete vaporproofing job on the pipes.

All three of the horizontal 4-in. pipe lines used for cold water delivery, were already covered with a 1½-in. thick multi-type mineral wool sectional pipe insulation, while fittings were covered with a 1-in. thick mineral wool felt insulation, plus a 1-in. layer of insulating cement.

To completely vaporproof each pipe, the inside surface of the molded type sectional pipe insulation was heavily coated with asphalt emulsion, and the sections pressed on the pipe. All adjoining sections were tightly butted together, and secured with jute twine, spirally wound over the insulation on 4-in. centers.

For the vapor barrier, wax-impregnated paper was then wrapped around the insulation, with the edges lapped 3 in., and sealed with asphalt

emulsion. A hard base for the finish was provided by a layer of rosin-sized paper, wrapped and sealed over the wax-impregnated wrapper.

Eight-oz. canvas was then pasted over the rosin-sized paper, and two coats of oil paint applied to finish the job.

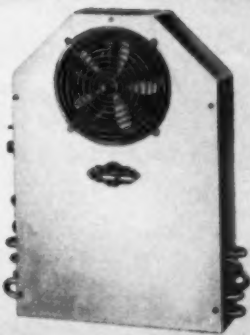
Where fittings were concerned, felt type insulation was used, tightly wrapped over each fitting, bound with jute twine, and covered with two ½-in. layers of mineral wool insulating cement, both layers being allowed to dry thoroughly. A thick vaporproofing coat of asphalt emulsion was then trowled on over the cement.

After a thorough drying, the fittings were finished with the same 8-oz. canvas, and two coats of oil paint.

Net results were pipe sections of neat appearance, and a tight moisture seal which guarantees that insulation will remain intact, even when exposed to temperatures of as high as 100°, and with a relative humidity of 90% or more. Operating costs, where refrigerating equipment and the hotel's ice water distribution system are concerned, have gone down noticeably, it was reported.

BETZ BEVERAGE BOX UNIT

FOR
INSTALLATION
EITHER
ON REAR WALL
OR
EXTREME END



Circulation from top to bottom insures temperature even though the doors remain open. Extremely compact—Will increase bottle capacity of the cabinet.

MODEL NO.	BTU AT 1" TD	CFM	SURFACE SQ. FT.	DIMENSIONS		
				H	W	D
130-DB	130	210	37.24	24¾"	20¾"	5"
190-DB	190	310	61.83	24¾"	20¾"	6½"
260-DB	260	425	77.25	24¾"	20¾"	8"

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HAMMOND • INDIANA

SOLENOID VALVES

Made Better to Serve Better

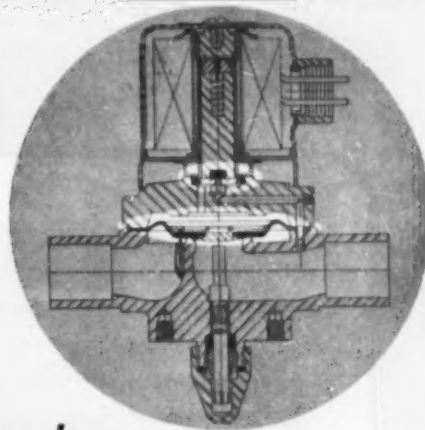
A SERIES OF DEPENDABILITY FEATURES

No. 1
Tight Seating

THESE PILOT-OPERATED VALVES have a composition main seat disc and a composition pilot seat disc. These materials were selected in cooperation with the U. S. Government and thoroughly tested in life breakdown tests.

This new JE design offers tight seating at any pressure within the operating range, and there is no "bubble tolerance" in our assembly, or testing lines. To make sure these Valves close tightly at all times, we have introduced "spring loaded" closing action.

5 Features of Dependability in



SOLENOID VALVES

- 1 TIGHT SEATING—No bubble tolerance
- 2 SIMPLICITY—Only two moving parts
- 3 LONG LIFE—Cool Coils
- 4 DURABILITY—All corrosion-resistant materials
- 5 OPENING PRESSURE DIFFERENTIAL—higher than most others on the market.

May we submit samples for your test and approval? Write today for details.

JACKES-EVANS MANUFACTURING COMPANY
CONTROLS DIVISION
4427 GERALDINE AVE. • ST. LOUIS 15, MO.



Commercial Refrigeration

Prospects Can See How It Looks

Photographs of Installations, Vanette Truck Prove Effective Sales Tools for Distributor



PHOTOS of installations in competitors' stores are a convincing sales tool employed by Tri-State Refrigeration in Memphis. Here W. J. "Bill" Pitts, star salesman, reviews his album with Tri-State owners Allen S. McCrea and Ralph R. Strickland.

MEMPHIS, Tenn.—"Our business is very good. Last November and August were way ahead of the same months in 1950 and set new records for us," declares Allen S. McCrea

who with his partner Ralph R. Strickland operates Tri-State Refrigeration, distributor for Warren and Cunningham cases.

"Whenever we get into a little rut

or sales begin to slump, we put on a sales contest for our four salesmen. This brings them right up again," he says.

As its name implies, this distributorship serves a three-state area that includes the western portion of Tennessee, the eastern half of Arkansas, and the northern part of Mississippi.

Although these frequent contests are important in building sales for the firm, the partners do not depend on them alone. Before the war, both of them had been in the automobile business and they have adapted some of the sales methods used in that field to promote refrigeration.

They first got into refrigeration in 1944 when they established a dealership in Blytheville, Ark. Two years later they transferred their operations to Memphis and only recently established headquarters in "Refrigeration Row" on Union Ave., the main east-west business street in Memphis.

PICTURES ARE BEST PROMOTION

"One of our best means of promoting sales," McCrea says, "is to take pictures of the installations we've already made. We use a little, inexpensive flash camera that's simple to operate. Several of these pictures are placed on the large bulletin board in our salesroom where prospects will see them when they come in."

"We always have the owner of the store in the picture with his new case, so this means that other prospects will usually see someone they recognize."

"Since a comparatively few prospects have the chance to get away from their stores, each salesman carries a small album of these pictures. It's a dandy sales method. If we



VANETTE truck fitted with two Cunningham cases is driven by Tri-State salesman to prospect's store so he can examine fixtures with no waste of time. This has sold many cases.

tell a prospect that his competitor some 20 miles away has the same or a similar case that we're suggesting he buy, he may not believe us, but if we show him our picture of this man standing in front of his new case, he's convinced."

Added Strickland, the other partner: "This picture business is nothing new for us. We used this method for years in selling used cars. A picture is worth a lot. A prospect seems to absorb a lot more by looking at the picture than he does merely listening to a salesman."

"To us, selling without pictures would be like a butcher trying to sell a woman a cut of meat that was wrapped up in a box so she couldn't see it," said McCrea.

This principle of giving the prospect convincing visual proof of the product's features and merits is shown in a very dramatic way by Tri-State's promotion of the Cunningham line.

2 CASES BOLTED IN TRUCK

"We bought an International Harvester vanette truck, laid linoleum, put in a couple of floodlights, and then bolted two open Cunningham cases to the floor of the truck, one for frozen foods, the other for dairy products," Strickland explains.

Each case is filled with dummy cartons, but the cases themselves are not kept under refrigeration. Being installed in a truck, the refrigeration units would probably not stand up under road shocks. Lack of refrigeration is no handicap, though, for prospects know the equipment will work, says Strickland.

"The main thing is to let the prospects see the case. When a grocer says he wants to take a look at one

of these cases, now we don't have to tell him there's one installed seven miles or so away. We simply drive the truck to his store and take him out to show him the cases."

"After all," continued Strickland, "when a prospect says 'no' it's just a sign of indecision and indicates that the salesman hasn't done a good job of selling. Then it's up to the salesman to convince the prospect. The display on the truck helps greatly in this."

"I'll say it does," chimed in W. J. "Bill" Pitts, the firm's leading salesman. "Why I sold three cases one day to the same customer, thanks to the truck."

SALESMEN TAKE TURNS WITH TRUCK

To get the most out of the \$5,000 it has invested in the truck, Tri-State keeps it busy all the time. The usual arrangement is to let each salesman drive the truck a week in his territory as he calls on prospects and customers. Naturally, this setup is changed as needed if a hot prospect develops in another territory.

"Contrary to what might be expected, the display truck is even more effective in the city of Memphis than it is out in the country," Strickland says. "It seems harder to get a city market operator to visit another store or our display room than to do likewise with a small town grocer."

"Quite a number of busy grocers seem to appreciate our having the truck. They'll take time out to look at the cases on the truck, explaining that they realize we've gone to a lot of trouble to bring the cases out to their store."

**YOU CAN SEE THE
EXTRA VALUE IN ANY
Servel
SUPERMETIC**

You'll be quick to spot the special advantages combined in the Servel Hermetic line. Continued refinement has whittled down weight, space requirements, and installation time. Supermetics' solid-quality construction leaves no doubt about durability. Precision-fitted internal design assures quiet operation. There's obviously greater protection for the motor and compressor in Servel's forced-feed lubrication system. And most important: there's Servel's low-cost factory-backed Warranty . . . to further safeguard both your profits and prestige . . . to keep more business coming your way!



**SIZES AND MODELS
TO MEET EXACTLY EVERY
COMMERCIAL REFRIGERATION
AND AIR CONDITIONING
NEED—1/5 TO 5 HP.**

Servel Wholesalers
carry a complete line
of Supermetics and
installation supplies.



WRITE TODAY FOR VALUABLE TRADE INFORMATION

SERVEL, INC., Electric Refrigeration Division, EVANSVILLE 20, IND.

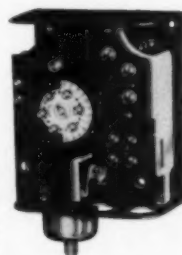
in this refrigeration
range and higher

**DEFROST
AUTOMATICALLY** with **T-P***

*T-P...Time-Pressure defrosting...is the best method for defrosting coils in display cases, display cases, reach-in boxes and other refrigeration equipment maintaining temperatures from 24° to 35° F. and higher. Here's why...

It automatically and correctly varies the defrost period as required . . . eliminates annoying problem of determining length of shut-down time for proper defrosting under varying load and weather conditions. T-P avoids unnecessary shut-down time by stopping compressor only long enough to defrost . . . and does it automatically!

Learn more about the PENN Series 325 Time-Pressure Defroster. It's easy to sell. Ask your wholesaler or write Penn Controls, Inc., Goshen, Indiana. Export Division: 13 E. 40th Street, New York 16, N. Y., U. S. A. In Canada: Penn Controls Limited, Toronto, Ontario.



Interior of Type 325. Timer can be set for one to six "off periods" every 24 hours. Length of "off period" varies automatically with frost condition on coil.

PENN **AUTOMATIC CONTROLS**
FOR HEATING, REFRIGERATION, AIR CONDITIONING, PUMPS, AIR COMPRESSORS, ENGINES, GAS RANGES



PANEL MEMBERS for the quiz contest at the February "Surprise Night" meeting of the Philadelphia chapter of ASRE were selected by the audience. From left to right they are: M. Silver, R. M. Armstrong, S. S. Ward, E. J. Delahanty, G. S. Mann, R. Johnson, T. H. Silary, W. Bissinger, A. H. Sawyer, and R. J. Thompson. S. C. Segal, standing, was moderator.

'Surprise Night' at Philadelphia ASRE Meeting Features 'Panel Quiz' Session

PHILADELPHIA — "Surprise Night" at the February meeting of the Philadelphia Section of the American Society of Refrigerating Engineers turned out to be a "panel quiz" session in which 10 members were selected by the audience and answered questions until they missed.

The panel consisted of M. Silver, R. M. Armstrong, S. S. Ward, E. J. Delahanty, G. S. Mann, R. Johnson,

T. H. Silary, W. Bissinger, A. H. Sawyer, and R. J. Thompson. S. C. Segal of Kramer Trenton Co. acted as moderator. Questions used ranged from basic refrigeration fundamentals to engineering problems.

After an hour-and-a-half of questions the panel narrowed to two members, Delahanty and Sawyer, both of Carrier Corp., and the contest had to be called a draw as time ran out.

White-Rodgers Service Information Div. Offers Educational Program

ST. LOUIS—Service Information Div. of White-Rodgers Electric Co. here has announced that it is prepared to stage educational meetings for servicemen and installers and others interested in automatic control devices for refrigeration, air conditioning, and all types of heating equipment.

There is no charge for these meetings, nor does the company set a minimum or maximum number for the size of the group. The meetings can be sponsored by public utilities, manufacturers, distributors, wholesalers, schools, technical societies, trade organizations, labor groups, or similar gatherings.

Kalamazoo Bank Installs Year-Round System

KALAMAZOO, Mich. — The First Federal Savings and Loan Association here has completed a remodeling program, including the installation of a central station all-year air conditioning system using UsAirco self-contained RK equipment. It is reported by J. Daniel Rupert, United States Air Conditioning Corp. representative here.

The system, installed by Tony's Refrigeration, contractor, from plans by the Chicago Bank Equipment Co., utilizes a 15-ton RK unit to provide conditioned air to the main banking area and five offices.

The packaged UsAirco unit is equipped with a steam coil for winter heating and also contains a built-in evaporative condenser.

Central Kitchen, 6 Reach-Ins Solve Rising Food Service Costs for Drugstore Chain

WACO, Texas—The installation of duplicate reach-in refrigerators at each soda fountain of the six Pipkin Drugstores here, is helping the Texas drugstore chain to realize a \$200 per week saving in food service costs.

One of the oldest drugstore chains in central Texas, the Pipkin stores formerly provided complete hot food service in each unit, with an 18 to 22-stool fountain, serviced from a completely-equipped kitchen.

Because of high operating costs, it has been necessary to cut food costs to the bone, according to Thurman Frazier, head of fountain service operations.

This resulted in transferring all cooking operations to the 3rd and Austin St. store in downtown Waco, in the basement of which is a huge kitchen, equipped with ranges, deep-fat fryers, ovens, worktables, salad bar, and dessert block. All foods are now prepared here and shipped by panel truck in "Thermocan" hot food units, to each fountain.

For maintaining a huge stock of foods bought in large quantities at lower prices, plus storage of surpluses, Frazier installed a custom-built, 10 by 8-ft. walk-in refrigerator, in the basement kitchen.

Installed by Waco Refrigeration Co., the walk-in has a dome-type overhead coil, and can range from -10° F. to any desired higher temperature, merely by setting a simple control.

If it is necessary to handle only



New Jersey Contractors Install Officers

1952 officers of the Refrigeration Contractors Association of New Jersey were installed at a party held in the Hotel Douglas, Newark, in a ceremony conducted by Anthony G. Dietl, past president (1949 & '50). Officers are as follows (left to right): William Gresh of National Appliance Co., Union, party chairman; John S. Sanok of Conditioning Co., Inc., Newark, secretary-treasurer; Michael Dee Patillo of Tony Patillo Refrig. Co., Nutley, president; Lee L. Richardson of Richardson & Richardson Inc., Nutley, past president (1951); Anthony G. Dietl of Dietl & Kraft, Newark, master of ceremony; Silvio C. Filippone of Filippone Refrig. Co., Jersey City, vice president; Frederick Young of Nutley, executive secretary; and Harold Bahlhoff of Harold Refrig. Co., Dover, sergeant-at-arms.

frozen foods, the big refrigerator can be used for the purpose, or if foods which require only moderate refrigeration are being stored, the box can operate at 35°.

Refrigerated food items move from this central walk-in box in the same insulated cans to six 4-door, 16-cu. ft. reach-in boxes, located at the rear of each fountain. Here, the amount of food adequate to serve the average traffic of each store, can be kept under cold storage, while a stainless steel steamtable takes care of hot entrees, soups, and vegetables.

By switching over to this central

kitchen system, it is believed that the food service operation can get along with at least four less employees, and possibly more with a saving of between \$200 and \$300 a week, according to Frazier.

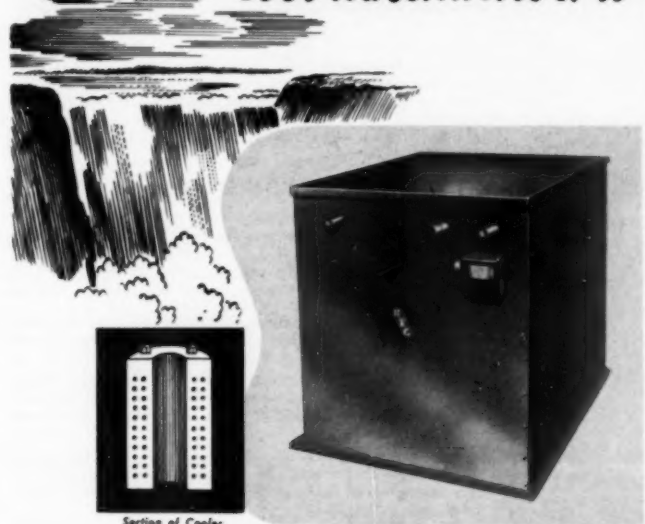
"With adequate refrigeration at each fountain, we can handle huge quantities of food, with no fear of spoilage or loss," he emphasized.

NEW PRODUCTS?

Turn to "What's New" Page for Useful information on new products. Use Key No. for fastest service.

HEAVY DUTY LIQUID COOLERS

Cool water... lots of it

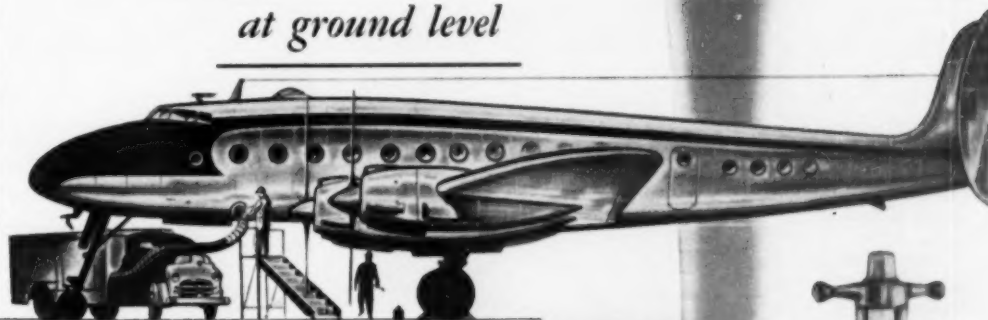


A liquid cooler of high capacity, simply constructed with separate liquid and refrigerant coils cast in aluminum blocks. The great strength of the casting eliminates freeze-up damage while the mass of aluminum provides sufficient holdover to prevent short cycling. Ideal for bakeries, bottling plants, processing applications, circulating chilled water systems, mess halls, cafeterias. Write for specifications and application data.

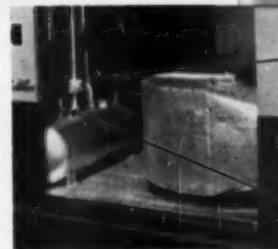
THE HEAT-X-CHANGER CO., Inc.
BREWSTER - NEW YORK

Where Quality Counts Most - it's KEROTEST

5000 foot
coolness
at ground level



On the critical jobs . . . those that must function dependably day-in and day-out . . . it's KEROTEST Refrigeration Valves and Fittings. Yes, where quality counts most as it does on this mobile aircraft air conditioner . . . Kerotest's extra quality is the choice and at no extra cost! When you buy . . . buy KEROTEST . . . and be sure.



Mobile Aircraft Air Conditioning Unit assembled by Airtemp Construction Corp., Dayton.



See Your
Kerotest Wholesaler
FIRST



KEROTEST MANUFACTURING COMPANY
Pittsburgh 22, Pa.

Air Force--

(Concluded from preceding page)
asked to explain why he had overlooked this deficiency.

"This gives you an idea of the manner in which the refrigeration mechanic goes about his job of keeping the Air Force refrigeration facilities in proper working order, but what about the mechanic himself?"

"You thoroughly understand that the efficiency and effectiveness of any organization, be it a ladies' sewing club, a corner drugstore, a big business, or the Air Force, depends upon people. An organization is not just a lot of machines, tools, equipment, and work sheets. It's people, men and women, and the way they do their jobs—the extent to which they put their brains and hearts and souls into whatever they do.

"It's people like you and me that make up the refrigeration sections of the Air Force, and if they are capable, intelligent, and well trained for their respective positions we will have a smooth, efficient organization and this success will be reflected in better performance at a minimum cost.

IMPROPER TRAINING IS EXPENSIVE

"Conversely, if those in responsible positions are not thoroughly acquainted with the problems involved in maintenance, repair, and operation there is every reason to expect unsatisfactory operation from the equipment involved and that costs will skyrocket. And those costs will soar regardless of the perfection to which the preventive maintenance system has been developed," Smith said.

"The problem, then, is twofold: First, to build a strong, capable, and efficient organization of men well fitted for their respective positions, and second to train these men to perform their duties to the greatest advantage to the organization. These men should feel that, although they are only a 'cog' in a large wheel, each 'cog' is absolutely essential, and just as the gear fails to function at its designed efficiency when one 'cog' is missing, so will the Air Force suffer in proportion when the performance of any activity is unsatisfactory.

"The Air Force refrigeration mechanic's training program is the natural outgrowth of such thinking. It reaches right down to the very heart of the maintenance and operation problem: namely, the refrigeration mechanic. By teaching him the latest techniques for the maintenance and operation of refrigeration plants and systems, the quality of this maintenance and operation can be expected to improve.

"This training program was started early in 1950 by a series of four conferences held at various parts of the United States. The first was at Olmsted AFB, Pa., the second at Robins AFB, Ga., the third at Tinker AFB, Okla., and the last at San Bernardino AFB, Calif. Refrigeration mechanics from all bases within the Continental U. S. and from some overseas installations were present at these conferences and these men were urged to enter freely into the open discussions. Every effort was made by the leaders of these meetings to draw the men out and learn of their problems.

"The theme of these meetings was to help the refrigeration mechanic do his job better. Every part of the program was prepared with this thought foremost. The subjects were selected with great care after a prolonged study of all the factors available to us, and every effort was made to present them in the most effective manner.

YORK SETS UP ADVANCED TRAINING COURSE

"From these meetings we at headquarters recognized the need for further training in the field of refrigeration service and in order to provide this instruction a contract was made with York Corp. to set up an advanced training course for refrigeration and air conditioning mechanics.

"Basically the purpose of this training course is to improve the quality of the maintenance and operation of Air Force refrigeration plants and systems. More specifically—to present to Air Force maintenance personnel refrigeration 'know-how,' to promote uniformity of maintenance methods and standards, and to teach the latest recommended techniques for the maintenance of refrigeration and air conditioning equipment."

Table 2—Cont.

23	Compressor Motor:	Check motor bearings; lubricate only when necessary (see par. 5). Observe motor when starting for proper speed pick-up. Wipe dirt from motor housing.
24	Compressor Drive:	Check compressor drive for pulley alignment, belt tension, and condition of belts. Wipe dirt and oil or grease from pulleys, flywheel, and belt.
25	Compressor Body:	Check compressor and shaft seal for signs of gasket and seal failure. Check oil level in compressor crankcase. Observe condition of the oil every six months.
26	Refrigerant Leaks:	Test all refrigerant lines, connections, and refrigerant-containing equipment for leaks. <small>Note. A halide torch is the only flame device authorized for use in detecting refrigerant leaks. A halide torch must not be used in hazardous locations such as powder storage rooms in fortifications, shell-loading rooms, and the like. Rooms or machine compartments must be ventilated thoroughly before using the torch to test for methyl chloride leaks.</small>
27	User Instructions:	Instruct using personnel on proper starting, stopping, and use of equipment. If individual instruction posters are available for specific equipment, post them on or near starting switch controlling each unit.
EVAPORATIVE CONDENSER OR COOLING TOWER		
28	Electric Power Supply:	See item 1.
29	Inlet and Discharge Ducts:	Clean lint, dirt, and the like from louvers and screens. Check position of dampers for maximum air flow.

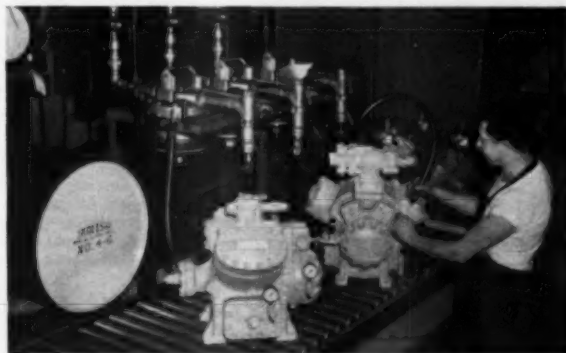
30	Fan Assembly:	See item 7.
31	Fan Drive:	See item 8.
32	Fan Motor:	See item 9.
33	Condenser Coil:	Clean condenser coil and fins. Check for evidence of excessive coil scale or corrosion.
34	Pump Assembly:	Check pump bearings and glands. Lubricate only when necessary (par. 5). Clean suction screen. Observe pump operation and check for excess vibration. Wipe dirt from pump housing.
35	Pump Drive:	Check pump drive for pulley alignment, belt tension, and condition of belts. Wipe dirt and oil or grease from pulleys and belts.
36	Pump Motor:	Check motor bearings; lubricate only when necessary (par. 5). Observe motor when starting for proper speed pick-up. Wipe dirt from motor housing.
37	Spray System:	Level unit. Clean nozzles or water-distribution troughs. Check for adequate water distribution over coil or baffles. Check piping for leaks between pump and nozzles or trough.
38	Water Supply and Drain System:	Check water supply and drain line, fittings, and valves for leaks and security. Check float-valve operation. Check bleeder line or float-valve setting for constant and adequate overflow.
39	Casing:	Clean casing, pan, and eliminators. Paint when necessary to prevent further deterioration.
	Miscellaneous:	Perform other preventive maintenance services needed to keep special items of equipment in proper operating condition and enter them on work sheet.

MANUFACTURERS' CHOICE OF SUNISO PROVES IT BEST FOR SERVICEMEN

Their Technical Staffs Have Confirmed the
"Job Proved" Quality of Suniso Refrigeration Oil



A 10-YEAR TEST of two compressors run on Suniso Oil was recently completed by an important maker of domestic compressors. Careful examination showed all cylinders, connecting rod bearings, pistons and valves to be good as new after approximately 80,000 hours' operation. And no gum or sludge had formed.



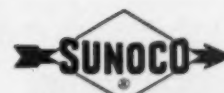
SUNISO ENDS SUBZERO WAXING. Several years ago one of the leading companies making large industrial compressors found that its refrigeration oil was "waxing out" at low temperatures. It then ran tests on a variety of competitive oils. Its exhaustive laboratory analyses proved that when used with Freon, Suniso had a lower wax separation point than any other oil. The company has used Suniso for eight years with complete satisfaction.



Genuine Suniso is available
to the service trade
through authorized
Kelvinator Dealers, and
wholesalers supplied by
Virginia Smelting Company

SUNISO REFRIGERATION OILS

SUN OIL COMPANY, PHILADELPHIA 3, PA. • SUN OIL COMPANY, LTD., TORONTO AND MONTREAL



Refrigeration Problems

and their Solution

by Paul Reed

For Service and Installation Engineers



Paul Reed

'F-13' & 'F-14' for Ultra-Low Temps.

'FREON-13' AND 'FREON-14' FOR ULTRA-LOW TEMPERATURES

Kinetic Chemicals (now known as the Kinetic Chemicals Div. of E. I. du Pont de Nemours) has developed two new "Freons" for the ultra-low temperature field. They are "Freon-13" with a boiling point at atmospheric pressure, of -114.5° , and "Freon-14" with a boiling point also, of course, at atmospheric pressure, of -198.3° .

Kinetic advises that "Freon-13" and "Freon-14" are not available at present in commercial quantities, through wholesalers or other normal trade channels, but may be obtained directly from Kinetic by manufacturers or others for experimental purposes in developing low temperature equipment. Volume demand for either or both of these refrigerants would undoubtedly result in Kinetic producing them in quantity for distribution through the usual trade channels.

'FREON-13' Approximate Pressures at Saturation Temperatures

'F.	'Freon-13' Pressures P.s.i.g.
-140	17"
-135	14"
-130	12"
-125	9"
-120	5"
-115	6"
-110	2"
-105	5"
-100	7"
-90	15"
-80	23"
-70	33"
-60	45"
-50	60"
-40	75"
-30	90"
-20	115"
-10	138"
0	165"
10	200"
20	233"
30	275"
40	325"
50	385"
60	450"

83.9 Critical Temperature

1.5 Inches of Mercury Vacuum.

(Values taken from pressure-enthalpy charts of Kinetic Chemicals Div. of du Pont.)

'FREON-22'-'FREON-13' CASCADE

Evaporator temperature down to -115° can be obtained with "Freon-13" without the suction pressure going into a vacuum, which as mentioned previously, is desirable from a field viewpoint in case of leaks. An evaporator temperature of -130° may be obtained if a suction pressure of about 12 in. of vacuum is permissible.

Moreover, these ultra-low temperatures can be obtained with reasonably good efficiencies by using a two-stage cascade system. Using "Freon-13" in the lower temperature stage, with a condensing temperature of -30° , the condensing pressure would be 90 p.s.i.g., and with the low temperature evaporator at -115° , the "Freon-13" suction pressure would be approximately 6 p.s.i.g., thus giving a compression ratio of 7.2 to 1, which is quite acceptable.

Using "Freon-22" in the higher temperature stage and with a condensing temperature of 80° , the condensing pressure would be 145 p.s.i.g. and with a -40° evaporator the "Freon-22" suction pressure would be 6 p.s.i.g., thus giving a compression ratio of 10.8 to 1 which, while a little above the 10 to 1

usually considered a desirable maximum, is acceptable.

'KULENE 131'-'FREON-13' CASCADE

Instead of "Freon-22," "Kulene 131" could be used in the high temperature stage. With the same condensing and evaporator temperatures of 80° and -40° , respectively, the "Kulene 131" condensing pressure would be 227.4 p.s.i.g. and the "Kulene 131" suction pressure 17.7 p.s.i.g., thus giving a compression ratio of 7.5 to 1, as compared with the 10.8 to 1 for "Freon-22." However, the condensing pressure of 227 p.s.i.g. might require a more heavily constructed condenser.

THE 'FREON-13' STAGE

At -30° condensing and -115° evaporating, as in the low temperature stage, the net refrigerating effect of "Freon-13" is approximately 45.3 B.t.u. per lb. requiring the circulation of 4.42 lbs. of "Freon-13" per minute per ton of refrigeration. The specific volume of saturated "Freon-13" vapor at -115° is approximately 1.86 cu. ft. per lb. Thus, the theoretical displacement of the compressor is 8.3 c.f.m.

This compares with 123.2 for "Freon-12," and 71.8 for "Freon-22" at the same condensing and evaporative temperatures. With a compression ratio of 7.5 to 1 and with some superheating it is doubtful if the volumetric ratio would be much better than 50%, so the actual displacement of the "Freon-13" compressor would probably be 16 or 17 c.f.m. Sub-cooling the liquid from -30° to -85° , could help this considerably, however.

-200° WITH 'FREON-14'

Lower and lower temperatures for testing, cold-treatment of metals, and for laboratory processes are being demanded, and -150° to -200° are not as uncommon as might be supposed. Temperatures below -115° can be obtained with "Freon-13" by going into a vacuum, but "Freon-14" permits temperatures down to -198° without having the evaporator pressure below 0 gauge.

'FREON-14'

Approximate Pressures at Saturation Temperatures

'F.	'Freon-14' Pressures P.s.i.g.
-250	25"
-240	26"
-230	23"
-220	19"
-210	13"
-200	2"
-190	5"
-180	14"
-170	25"
-160	38"
-150	56"
-140	76"
-130	100"
-120	130"
-110	165"
-100	205"
-90	252"
-80	305"
-70	370"
-60	442"

49.9 Critical Temperature

1.5 Inches of Mercury Vacuum.

(Values taken from pressure-enthalpy charts furnished through courtesy of Kinetic Chemicals Div. of E. I. du Pont de Nemours & Co.)

However, it is not practical to obtain such low temperatures in two stages, for the compression ratios would be excessive and would result in low compressor volumetric efficiencies. A third stage could be added that would permit temperatures of -200° and even lower with comparatively good efficiencies and with reasonably simple equipment.

In the foregoing we have described the use of two stages in cascade to obtain a low temperature of -115° with compression ratios of about 7½ to 1, and with suction and discharge pressures that we are accustomed to in ordinary commercial work with medium temperatures.

With the additional stage using "Freon-14," the condensing temperature would be -105° (allowing 10° for heat transfer between the "Freon-13" evaporator and the "Freon-14" condenser). This would result in a condensing pressure of approximately 180 p.s.i.g.

With the "Freon-14" evaporator at -200° , the suction pressure would be 2 in. of mercury vacuum and with a 185 p.s.i.g. head pressure the compression ratio would be 14½ to 1. This is too much, especially for the low temperature stage. It would be better to allow higher compression ratios to the two upper stages, and thereby reduce the compression ratio of the "Freon-14" stage.

If we allow a 9.5 to 1 ratio in the

"Freon-14" stage (1st stage), its condensing pressure would be (9.5 × 13.8 p.s.i.g.) approximately 132 p.s.i.g., which corresponds to a saturation temperature of about -124° .

Allowing 10° for heat transfer between the "Freon-14" condenser and the "Freon-13" evaporator, the evaporator temperature of the "Freon-13" stage (2nd stage) would be -134° , so the "Freon-13" suction pressure would be 13 in. of mercury vacuum. Allowing a 10 to 1 compression ratio, the "Freon-13" condensing pressure would be approximately 70 p.s.i.g., corresponding to a condensing temperature of -41° .

Again allowing 10° for heat transfer, the evaporator temperature of the high temperature (third) stage would be -51° . If "Freon-22" were used, its evaporator pressure would be 6.7 in. of vacuum, and with an 80° condensing temperature the "Freon-22" head pressure would be 145 p.s.i.g., a compression ratio of 14 to 1.

If "Kulene 131" were used in the high temperature stage and with, of course, an evaporator temperature of -51° , its suction pressure would be approximately 9.5 p.s.i.g. At 80° condensing, "Kulene 131" head pressure would be 227.4 p.s.i.g., thus giving a compression ratio of about 10 to 1—somewhat better than for "Freon-22."

In this example, 10° has been allowed for heat transfer between the condensers of the 1st and 2nd stages and the evaporators of the second and third stages, respectively. With careful design the 10° could probably be kept to 5° or 6° which would improve the compression ratios somewhat.

The use of heat exchangers between liquid and suction lines to sub-cool the liquid refrigerant will be found helpful in reducing compressor displacements and horsepower-per-ton, both of which are high compared to those to which we are accustomed in ordinary food preservation temperatures.

Sub-cooling of the liquid must not be done excessively at the expense of superheating the suction vapor at these low temperatures, for the loss from superheating the vapor can easily exceed the gain from liquid subcooling.

Controls must be so arranged that the third stage is started first, and the third stage evaporator brought down near the temperature shown, in order to prevent excessive condensing pressures in the second stage. The same applies to the second and third stage.

After the second stage condenser is cold, the 2nd stage should be operated until its evaporator is at or near the temperature shown in the above table, so as to avoid excessive "Freon-14" condensing pressures in

(Continued on next page)

KOLD-HOLD

truck refrigeration
increases sales,
reduces spoilage
...at lower cost



The cost of "Hold-Over" Truck Refrigeration is so little that its advantages outweigh its cost . . . and it pays for itself in a hurry. It increases sales, reduces spoilage, permits longer runs and saves handling time . . . It does all this for less than the cost of ice alone.

Kold-Hold "Hold-Over" Truck Refrigeration increases sales because it keeps your truck contents cold, clean, dry and odorless, and improves their sales appeal. It reduces spoilage because the temperature of the truck can be predetermined and maintained throughout the longest day's hauls. And when the truck returns from its trip, undelivered loads can be left in the truck to save overtime handling.

"Hold-Over" Truck Plates reduce the cost of marketing perishable foods. Operating either off the existing plant cooling system or with condensing unit mounted on truck, they protect your products in transit . . . for less than 10 cents a day!

So why pay a premium for inadequate refrigeration when you can refrigerate your trucks at a profit, using "Hold-Over" Truck Plates. Write for full details today.

KOLD-HOLD

protects every step of the way



KOLD-HOLD MANUFACTURING COMPANY

300 E. WENT ST., LANSING 6, MICHIGAN

TO REPLACE CARBON TET
FOR SHOP USE



SEE YOUR
LOCAL
JOBBER

Send for Instruction Sheet

SEALED UNIT PARTS CO., INC.
261 East 161st St., New York, N. Y.

Genuine Joe says:



Play safe . . .

When new motor-starting capacitors are needed, always replace with genuine Wagner Capacitors. Same high quality as original—and you're sure to be right every time.

Wagner Electric Corporation
8471 PLYMOUTH AVENUE, SAINT LOUIS 16, MO., U. S. A.

WE WILL BUY!

SURPLUS REFRIGERATION UNITS

BELT-DRIVEN HERMETICS

1/8 H.P. to 10 H.P.

ANY QUANTITIES • MUST BE NEW

Write, Phone Or Call For IMMEDIATE ACTION

TRACO Industrial Corp.

455 W. 19 St., N. Y. 19, WALKINS 4-4302

Send for Traco's complete list of sensational bargains!

'F-13 & 'F-14' for Ultra-Low Temps.--

	1st Stage Freon-12	2nd Stage Freon-12	3rd Stage Kulene 131
Condensing Pressure P.s.i.g.	117	70	227.4
Condensing Temperature °F.	-124	-41	80.0
Evaporator Pressure P.s.i.g.	2	13	9.5
Evaporator Temperature °F.	-200	-134	-51
Compression Ratio	9.5 to 1	10 to 1	10 to 1

* Is Inches of Mercury Vacuum

Note: Most of the above values were taken from pressure-enthalpy diagrams and are therefore approximate only.

(Continued from preceding page) the first stage. Failure to take this precaution in each of the two pull-downs may cause heavy overloading of the first and second stages, especially their motors.

These precautions also apply in the use of ethane or ethylene, both of which have high pressures at normal room or water temperatures.

The field in general has had no experience with "Freon-13" and "Freon-14," so considerable experimental work would have to be done by a manufacturer before going into quantity production of equipment using either of these two new refrigerants.

"Freon-13" and "Freon-14" in addition to being non-flammable and of very low toxicity, also have good thermodynamic characteristics, high vapor densities, and low compressor displacements which make them quite

suitable as ultra-low temperature refrigerants. Although they are now available in small quantities for experimental purposes only, interest in them is more than academic.

The rapid increase in the use of ultra-low temperatures, and the tendency toward lower and lower temperatures, indicate the value of "Freon-13" and "Freon-14" in future ultra-low temperature development.

ETHANE AND ETHYLENE
NOW USED

In the meantime ethane, with a boiling point of -127.5° at atmospheric pressure, and ethylene with a boiling point of -155°, are very satisfactory refrigerants with very good thermodynamic characteristics for ultra-low temperature below about -100°, except, of course, both being straight hydrocarbons, they are highly flammable and moderately toxic. They must be handled with reasonable care.

Moreover, ultra-low temperatures are ordinarily used in industrial systems in factories, where flammability and toxicity hazards are more tolerable than in homes, hotels, theaters, and other occupancies where minimum hazards are essential.

Methane, another straight hydrocarbon, with a boiling point of -258.9° is also available for even lower temperatures.

"Kulene 131" has good thermodynamic properties, favorable characteristics as to flammability and toxicity, low displacement and compression ratio, and a low boiling point at atmospheric pressure, to make it a welcome refrigerant for those interested in low temperature work, especially for those temperatures below -40° F.

(To Be Continued)

Misleading Ads--

(Concluded from Page 1, Column 2)

the fact that a vacuum cleaner purchased in response to this advertisement was not completely rebuilt as advertised but contained broken and worn parts and was in a dirty condition. Also, all the attachments were not new.

"We regret this error and have taken steps to prevent recurrence and invite any dissatisfied customer to return the merchandise for refund."

Said the correction published by House of Television:

"We recently advertised a 17-in. Table Model Television set at \$89.95—\$17.50 down—stating that this included. Complete parts warranty, picture tube warranty, installation, 1 year qualified service policy, antenna, NO EXTRA CHARGES.

"Our attention has been called to the fact that extra charges were made.

"There was a charge of \$19.80 in every instance for a 6 months picture tube and parts warranty. There was a \$10 charge of 'transportation and set up.' There was a \$12.50 charge for the 1 year service policy. There were varying charges for inside and outside antenna.

"We regret the foregoing, invite any dissatisfied purchaser to return the merchandise for refund, and pledge that there will be no recurrence."

The Detroit BBB's battle against the bargain offers of rebuilt sewing machines and vacuum cleaners is part of a drive being waged by Better Business Bureaus on a nationwide basis. The story is told in the February issue of the local bureau's *The Factfinder*, as is an account of the BBB's findings regarding House of Television.

'COME-ON' ADS FLAGRANT
COAST-TO-COAST

"Bait" advertising of so-called 'rebuilt' vacuum cleaners and sewing machines became so flagrant during 1951," the BBB publication said, "that the annual conference of Better Business Bureaus held at Colorado Springs condemned this come-on racket and pledged cooperation in curbing such exploitation of the public."

"The come-on advertisements in question have been appearing in cities throughout the country and ballyhoo purported bargains in 'rebuilt' machines—the vacuum cleaners at about \$13.75 and the sewing machines at \$29.50.

"Continuing complaint has been received that machines sold as American made turned out to be made in Japan—and in one instance . . . even the inconspicuously placed tag 'Made in Japan' had actually been removed before delivery to the customer!

"Confronted with this rash of 'bait' advertising, the bureau discussed the problem with the newspapers, radio, and television stations and received assurances of cooperation in a clean-up.

"The following fair practice rules have been mailed to all local advertisers of 'rebuilt' vacuum cleaners and sewing machines:

"1. To have the advertised merchandise on hand at the advertised address, available for inspection and/or demonstration and for prompt delivery to purchasers.

"2. To willingly sell any machine used as a demonstrator and give immediate possession if the customer requests and pays for it.

"3. To accurately describe the condition of the used machine offered. If described as 'Reconditioned,' the machine shall have had such repairs or adjustments as to put it in satisfactory operating condition. If described as 'Reconstructed' or 'Rebuilt,' the machine shall have been disassembled, then reconstructed or rebuilt with all necessary repairs, all necessary replacements with new parts and attachments, and re-

WE WILL BUY!

SURPLUS

REFRIGERATION CONTROLS
PRESSURE and THERMOSTATIC

ANY QUANTITIES • MUST BE NEW

Write, Phone Or Call For
IMMEDIATE ACTION

TRACO Industrial Corp.

455 W. 19 St., N. Y. 19, W. 4-302

(Send for price list and specifications on request)

finished.

"4. To advertise and/or sell no machine which is not in condition to perform in satisfactory fashion.

"5. To clearly state exactly what protection is afforded the customer if any reference is made to a warranty or guarantee in the advertising . . . and to furnish each purchaser with a copy of such guarantee at time of sale.

"6. To permit no 'knocking' in connection with advertised machines or other unfair sales tactics.

"7. To eliminate unsubstantiated comparative prices or value claims and deceptive come-on offers such as '3 days only!' 'Wednesday last day!' . . .

"8. To eliminate—or provide the bureau with definite proof that such offers as the following are being lived up to—'Hair drier included to the first 25 customers'—'Button hole maker included with purchase of each machine'—'Sprayer at no extra cost'—'No cost for sewing lessons or pinkie shears'.

"9. 'Free Home Trial' shall mean that the customer shall have an opportunity to try out the machine in her home for not less than 24 hours without commitment to purchase or payment of any kind.

"10. Foreign made sewing machines shall be clearly described as such. If an advertised machine is undersized or is limited in performance (for example, sewing chain stitch only) the ad shall so state.

Regarding House of Television, the BBB said this concern "a prolific source of customer complaints to the bureau—has been featuring a so-called 'Mystery Melody' contest over several radio stations.

"Radio listeners have been impor-

tuned morning and night to earn \$100, just by sending in the name of the tune they hear. The first 20 to identify the tune, says the announcer, will get a check for \$100 good on any purchase at the House of Television.

"That this is not a bona fide contest was made clear by 14 responses sent in by the bureau. Eleven of the songs named were intentionally incorrect—for instance, the 'Star Spangled Banner' and 'The Volga Boatman' for 'Begin the Beguine'—but all 14 got \$100 checks and phony congratulations to 'lucky winners'.

"Bureau shoppers who had received the '\$100' prizes were unable to find a single nationally advertised 16-in. table model TV priced at \$199.95 in any of the company's stores. Salesmen attempted to switch them into the House of Television's own brands.

"On Jan. 18 the 'Mystery Melody' advertising was reviewed by the Wayne County Prosecutor's Office and the House of Television officials, counsel, and advertising agency were advised that it was both deceptive and fraudulent and should be discontinued.

"The bureau reported these facts to local newspapers, radio, and TV stations with recommendation that, in the public interest, media refuse to accept any more of this deceptive advertising.

"On Jan. 24, Federal Judge Thomas P. Thornton, upon complaint of the Office of Price Stabilization to whom numerous bureau complaints had been referred, issued a temporary restraining order, enjoining the House of Television from selling or offering for sale its TV sets, antennas, etc. at prices in excess of its filed OPB prices."

NEW Cross-Flow
HEAVY-DUTY
DRIER-FILTER



THE MOST
EFFICIENT EVER MADE!

Now 100% improved—and 100% foolproof with new fiberglass depth filter for increased filtering capacity—and new MOLDED Remco Drying agent for increased moisture-absorbing capacity and improved efficiency. Also with silica gel. Capacities 1-1/2 thru 5 tons. Send for descriptive folder.

REMCO INCORPORATED
ZELIENOPLE, PA.

NO MATTER WHAT

—it's here!

No matter which one of a thousand refrigerator models made since 1925, you will find a "specific-fit" replacement unit for it in Cutler-Hammer's Line.



You know you're right when you use C-H "specific-fit" controls.



9502N95 C-H "specific-fit" for Moffat 1936-37 models.



9521N43 C-H "specific-fit" for Briggs 1938 models.



9502N376 C-H "specific-fit" for May-Rover and Trupar 1933-34-35-36 models.



9521N85 C-H "specific-fit" for Philco 1940 models.



9525N115 C-H "specific-fit" for Morquette Freezer



Featured by Cutler-Hammer refrigeration wholesalers and recommended by alert service dealers from coast to coast

Want to save time and trouble on your refrigeration control replacements? Then make the Cutler-Hammer refrigeration control catalog your standard "guide" on replacements. Here you will find "specific-fit" units which are not merely listed but already manufactured by Cutler-Hammer for more than 1,000 individual refrigerator models which the industry has produced since 1925. No "modifying," no fussing, no compromises, when you put in C-H "specific-fit" replacement control units. And you'll also quickly see how the widely-known Cutler-Hammer name (advertised in The Saturday Evening Post, Time, Newsweek, American Home, Better Homes & Gardens, House & Garden, etc.) builds customer confidence and good will. The C-H refrigeration control catalog, as well as the items you need, are available through your authorized C-H refrigeration wholesaler. Do not forget, this C-H refrigeration control line includes the outstanding general purpose replacement control (9521N9) for use with motors having "built-in" overload protection. CUTLER-HAMMER, Inc., 1362 St. Paul Avenue, Milwaukee 1, Wis.

DOUBLE
YOUR AIR CONDITIONING
PROFITS
BY
DOUBLING
YOUR MARKETS AND
SALES

Sell BOTH



Remington
4-SEASON
WINDOW and CONSOLE MODELS

- PROFIT two ways: sell more prospects . . . enjoy twice the profit on every Remington Console sale!
- SELL the INDUSTRY'S MOST COMPLETE LINE of both window and console models . . . 70 models . . . from 1/2 to 1 1/2 HP . . . a model for every prospect need . . . a need for every model . . . yet you need stock ONLY SIX!

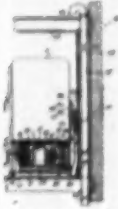
Write for name of your Remington Distributor TODAY! Remington Air Conditioning Corp., 52 Willey St., Auburn, N. Y.

Remington
4-SEASON
AIR CONDITIONING
DIVISION OF REMINGTON CORP.
AUBURN, N. Y.

PATENTS

Week of December 18
(Continued)

2,175,006. VENTILATING SYSTEM FOR REFRIGERATOR MECHANISM. Arthur M. Thompson, Chicago, Ill. Application April 8, 1946, Serial No. 14,068. 16 Claims. (Cl. 68-117.4.)



2. A ventilating system for drawing off heated air from adjacent the cooling chamber of a refrigerator comprising a refrigerant compartment, operatively connected mechanisms mounted within said compartment for running the refrigerator, said mechanisms including a condenser cooling fan, a unitary housing forming a double air enclosure connected with said compartment with one portion of the housing connected adjacent the discharge face of the fan and another portion of the housing connected with said fan, separable conduit means connected with the fan connecting part of said divided housing, and an air duct arranged for connection with said separable conduit means and having at least one opening therein disposed in a location remote from said refrigerator to discharge heated air from said one opening as such air is moved out of said compartment by said cooling fan.

2,579,330. REFRIGERATOR CRISPER. George L. Fournell, Cincinnati, Ohio. Ap-

plication Aug. 31, 1949, Serial No. 112,386. 6 Claims. (Cl. 68-26.)



4. A refrigerator crisper which comprises a hollow box, an upright main partition in said box dividing the box into a storage compartment and a humidifier compartment, a transverse partition in the humidifier compartment dividing the humidifier compartment into a lower enclosed water trap section and an upper ice holding section, means in the ice holding section for supporting particles of ice, the upper part of the main partition being apertured to permit circulation of air between the storage compartment and the upper section of the humidifier compartment, means for discharging ice meltage from the upper section of the humidifier compartment to the lower section thereof, and a water-sealing trap between the sections of the humidifier compartment to isolate the meltage in the lower section from air in the upper section of the humidifier compartment and in the storage compartment.

2,579,336. METHOD OF MAKING REFRIGERATOR CABINETS. Lawrence A. Philipp, Detroit, Mich., assignor to Nash-Kelvinator Corp., Detroit, Mich., a corporation of Maryland. Original application April 2, 1946, Serial No. 604,854. Divided and this application July 31, 1947, Serial No. 795,173. 9 Claims. (Cl. 28-108.5.)



1. The method of making a refrigerator cabinet which comprises, forming sheet material into a cabinet section of opposite side walls, a connecting wall with said side walls and inwardly directed retainer grooves along one edge of the section, attaching a panel to the opposite edge of the section to form therewith a box-like casing proper open opposite the connecting wall and opposite the panel, inserting insulation into the box-like casing proper, forming a one-piece box-like liner having outturned flanges along opposite and adjacent sides, engaging the opposite side flanges of the liner respectively in opposite side grooves of the casing proper through the opening opposite the connecting wall and sliding the liner into the casing inwardly of the insulation until the leading adjacent side flange engages in the retainer groove of the connecting wall, forming a casing panel with a retainer groove along one edge thereof, closing with insulation the opening opposite said connecting wall, and then attaching the panel to the casing proper with the panel groove receiving the other of the adjacent wall flanges to complete the casing and lock the liner thereto.

ISSUES

2,544,880. ABSORPTION REFRIGERATION. Wilhelm Georg Kogel, Stockholm, Sweden, assignor to Aktiebolaget Elektrolux, Stockholm, Sweden, a corporation of Sweden. Original No. 3,538,616, dated Jan. 18, 1961, Serial No. 668,509, Dec. 15, 1944. Application for reissue Oct. 20, 1951, Serial No. 583,528. In Sweden March 2, 1944. 13 Claims. (Cl. 68-119.5.)

12. In an absorption refrigeration system of the inert gas type including a vapor refrigerant vapor supply line, an upright heating tube having a lower heat input end, a circuit for circulation of absorption solution including an absorber, a liquid heat exchanger having a plural-

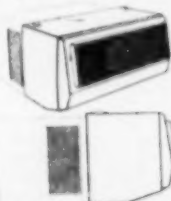
ity of passages and a vapor expansion unit comprising a first upright conduit in the vicinity of said tube, a first connection in-



cluding one passage of said liquid heat exchanger for conducting solution entirely by gravity flow from the outlet of said absorber to a region of said first conduit removed from the lower end thereof, a second upright conduit in thermal relation with said tube, a second connection including another passage of said liquid heat exchanger for conducting solution from said second conduit to the inlet of said absorber, said vapor supply line being connected to receive vapor from said second conduit, a lift pipe which is connected at its lower and upper ends to said first and second conduits, respectively, said first connection being so formed that said first conduit contains a liquid column whose liquid surface level is above the region solution is conducted thereto, and said lift pipe having a heat receiving and vapor forming part in thermal relation with said tube along a zone extending between the liquid surface level in said first conduit and the heat input end of said tube to cause expulsion of vapor from solution in said pipe and raise liquid therein by vapor lift action under the influence of a reaction head formed by the liquid column in said first conduit, said liquid heat exchanger being in the form of a coil disposed about said heating tube and said first conduit.

DESIGNS

165,494. CABINET FOR AN AIR-CONDITIONING UNIT ON SIMILAR ARTICLES. Walter Dorwin Teague, Annandale, N. Y., and Robert H. Ensign, Bronxville, N. Y., assignors to General Electric Co., a corporation of New York. Application April 7, 1951, Serial No. 14,744. Term of patent 14 years. (Cl. D28-4.)



The ornamental design for a cabinet for an air conditioning unit or similar article, substantially as shown and described.

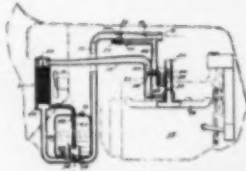
Week of December 25

2,579,477. AIR CONDITIONING APPARATUS AND THE LIKE. George S. Dauphinais, Brooklyn, N. Y., assignor to W. B. Connor Engineering Corp., New York, N. Y., a corporation of New York. Application May 28, 1949, Serial No. 95,987. 7 Claims. (Cl. 73-4.2.)



1. In combination with a device for adsorbing adulterants having a plurality of connected air-permeable units containing adsorbing material, a removable sampling element containing adsorbing material and having apertures permitting access of air to said material and means for removably associating said sampling element with said units, whereby to allow removal and testing of said element for predicting the useful life of the adsorbing material in said units.

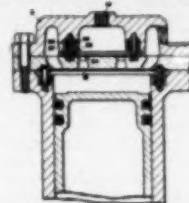
2,579,512. REFRIGERATING APPARATUS AND METHOD. Lester E. Perrine, Highland Park, Mich. Application May 8, 1946, Serial No. 608,227. 6 Claims. (Cl. 68-117.)



1. A refrigerating system operable for cooling space in a vehicle having an internal combustion engine for propelling the same, said engine having an induction system and a carburetor associated with said induction system for supplying fuel thereto, said carburetor having a throttle, said refrigerating system comprising an

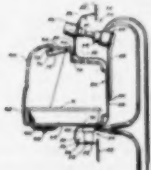
air conduit connected at one end to said induction system downstream relative to said throttle, said air conduit having an air inlet at the other end thereof, means associated with said conduit for mixing and substantially saturating the air flowing through said conduit with refrigerant, a portion of said conduit between said means and the connection between the conduit and the induction system forming a heat exchanger for the refrigerant saturated air flowing through the conduit, said heat exchanger being arranged for absorbing heat from the space in the vehicle to be cooled, an auxiliary carburetor having its throttle arranged in said air inlet and a fuel jet arranged in said air conduit downstream relative to said heat exchanger, and operating means connected to said throttle in such a manner so as to open the throttle of said auxiliary carburetor before the other throttle is opened and to close said throttle in the reverse order.

2,579,517. SUCTION VALVE FOR REFRIGERATING COMPRESSORS. Lars Hansen, Syracuse, N. Y., assignor to Carrier Corp., Syracuse, N. Y., a corporation of Delaware. Application Sept. 16, 1946, Serial No. 605,976. 6 Claims. (Cl. 251-119.)



1. In valve mechanism, the combination of part means disposed in a valve plate for the passage of fluid through the valve plate, a movable ring valve adapted to close the port means, a plurality of lugs integral with the ring and extending outwardly therefrom, springs engaging the lugs to hold the ring in position to close the port means, guide pins for said ring member, at least some of said pins fitting in orifices in said lugs, and a stop adapted to engage the lugs to limit the downward travel of the ring member.

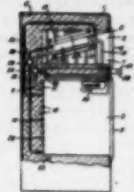
2,579,548. BUTTER CONDITIONER. Alfred E. Nave, Cincinnati, Ohio, assignor to Aveco Mfg. Corp., Cincinnati, Ohio, a corporation of Delaware. Application Sept. 17, 1949, Serial No. 116,968. 5 Claims. (Cl. 68-5.)



2. In a refrigerator cabinet having a main refrigerated food storage compartment, a support plate mounted upon a wall of said compartment, a housing enclosing an auxiliary food storage compartment, said housing being split into front and rear sections movable with re-

spect to each other, a hinge joining said sections whereby said front section may be rotated about a horizontal axis to provide access to the interior of said auxiliary compartment, a latch for releasably retaining said sections in closed relationship with respect to each other, a pin mounted on said support plate for releasably retaining said housing and support plate in assembled relationship, an opening in one wall of said housing disposed adjacent said support plate in assembled relationship, a thermostat disposed in thermal contact with said support plate adjacent said opening, an electric heating element operatively connected to said thermostat in thermal contact with said support plate beneath said housing for heating said auxiliary food storage compartment.

2,580,215. CONTROLLED HUMIDITY REFRIGERATOR. Le Mar S. Cooper, Cedar Rapids, Iowa, assignor to General Electric Company, a corporation of New York. Application May 25, 1948.



1. Refrigerating apparatus including a cabinet having a food storage compartment, a first evaporator arranged at the lower portion of said compartment, a second evaporator arranged at the upper portion of said compartment, means including a refrigerant condensing unit for supplying refrigerant to said first evaporator for operation at a temperature above the freezing point of water to maintain a high relative humidity in said compartment and for supplying refrigerant to said second evaporator for operation at a temperature below the freezing point of water to prevent excessively high humidity in said compartment, control means for rendering said second evaporator normally inoperative, and means responsive to a predetermined temperature of the air within said compartment for actuating said control means to render said second evaporator operative.

(To Be Continued)

TAKES TIME OUT



F. E. MORRISON

F. E. Morrison, Appliance Mgr., Rockford Standard Furniture Co., Rockford, Ill., says:

"I receive practically all of the trade publications, but the News is the one that I immediately take time out to read completely, as it seems the News gives us the most complete and most reliable information on what is new in our industry. Also your section on refrigeration problems and procedure is most helpful to our Service Department."

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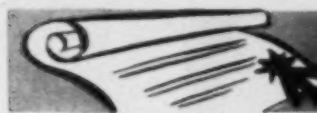
Send ☐ One Foot in the Door, \$3.00. ☐ The Marshal's Baton, \$5.00.
☐ Both Feet on the Ground, \$5.95. ☐ Check enclosed ☐ Bill me.

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State



PROCUREMENT INFORMATION

The following is a list of proposed procurements issued by the various indicated U. S. Government procurement offices. This list is compiled and made available daily on a free pick-up basis. Prospective bidders may obtain complete bid sets by a request to the purchasing office under which the purchase is listed in this Synopsis. Be sure to identify completely the bid invitation you wish by including in your request the item description, the invitation number or reference number and the opening date. This will save time in filling your request. For reasons of economy, specifications are normally not included with the bid invitations unless the specifications is a new one. First time bidders on a particular item should request a copy of applicable specifications and drawings at the time the request for a bid is made.

DEPARTMENT OF DEFENSE

It is not necessary to refer solely to the issuing office for additional data on a bid invitation issued by any of the following U. S. Army Ordnance Offices: Ordnance Tank Automotive Center; Detroit Arsenal; Frankford Arsenal; Picatinny Arsenal; Haritan Arsenal; Rock Island Arsenal; Springfield Armory; Watertown Arsenal; and Watervliet Arsenal. Complete information on any purchase listed by any of those offices alone can be obtained from the Ordnance District Office nearest you. Its address is on file in your nearest Department of Commerce Field Office. Do not ask an Ordnance District Office for information on a purchase unless it is listed by one of the above-named offices. Ordnance District Offices do not have information on any other purchases.

Description	Quantity	Invitation No.	Opening Date
Philadelphia District Corps Of Engineers, 121 N. Broad St., Philadelphia, Pennsylvania			
Ice plant, 1 ton skid mounted equipment only, gasoline driven.	28	(ENG-36-109-52-219 B)	4 Mar 52

Servel New York Names Stockhoff Gen. Sales Mgr. To Succeed Feigel

EVANSVILLE, Ind.—Appointment of Clifford A. Stockhoff as general sales manager of Servel New York Corp., distributor of Servel refrigerators and water heaters in the New York metropolitan area, was announced recently by W. Paul Jones, president of Servel, Inc. Stockhoff succeeds Leland M. Feigel who resigned to become secretary and president of Interstate Finance Co. of Evanville, Ind.

Stockhoff has been a member of the Servel organization for 15 years.

He is a native of Jersey City and a graduate of Stevens Institute of Technology in 1936.

RCA Victor Establishes Boston Regional Office

BOSTON—A new regional office of the RCA Victor Div., Radio Corp. of America, which will cover the New England states and eastern New York state north of New York City, was opened officially here recently at 200 Berkeley St.

Focal point of the newly established northeastern region of the company, the office will serve as a central location for the marketing of RCA Victor products in the area. The region is one of eight such divisions covering the U. S.

Robert M. Macrae, manager of the new region, was host at an open house celebrating the opening of the new office. The open house was attended by RCA Victor distributors and several top company officials from the company's headquarters in Camden, N. J.

The new region embraces distributor areas centered in Albany, Binghamton, Cambridge, Hartford, Portland, Providence, and Syracuse. It was formerly included in the company's eastern region.

New K-R Services Post of Controller Goes to Burke

NEWARK, N. J.—Promotion of Edmund W. Burke to the newly-created position of controller of K-R Services, Inc. was announced by Max H. Krich, president.

Burke will be in complete charge of all activities for the organization which services Krich-Northern Jersey, Inc., distributor in northern New Jersey for RCA Victor consumer products; Allied Distributors-New Jersey, Inc., exclusive wholesaler of Bendix home appliances; and Associated Distributors-New Jersey, Inc., northern New Jersey distributor for Norge home appliances, Lewyt vacuum cleaners, Vornado fans and heaters, and James automatic dishwashers.

Burke was credit manager for the Krich organization for the past six years. During World War II, just prior to his association with the Krich organization, Burke served in the United States Navy as a senior lieutenant. Prior to that, he was assistant credit manager for the Hyatt Bearings Div., General Motors Corp.

Government Contracts

Chicago Chemical Procurement District, Room 902, 226 W. Jackson Blvd., Chicago, Illinois
Methylene chloride 80 tons (GML-11 11 Mar 52 457-52-438)

CONTRACTS AWARDED THROUGH FEB. 25

Description—Contractor and Address

U. S. Department Of Commerce, Field Service
Refrigerators, electric, 8 cu. ft.—33,333.—Westinghouse Electric Supply Co., 381 Potrero Ave., San Francisco, California.
Ships Parts Control Center, Naval Supply Depot, Mechanicsburg, Pennsylvania
Repair parts for heat exchangers.—23,951.—General Motors Corp., Harrison Radiator Div., 500 Elm St., Lockport, New York.
Ordnance Corps, Watertown Arsenal, Watertown 73, Mass.
Install cold temp. room.—1, 562,000.—Steed Barber Corp., 17 Prescott St., Medford, Massachusetts.
Chicago Quartermaster Depot, QM Purchasing Division, 1819 W. Pershing Road, Chicago 9, Illinois
52-906 B Refrigerator.—200 ea.—The Warren Co., Inc., 906 Memorial Dr., S. E. Atlanta 1, Georgia.
52-906 B Refrigerator.—250 ea.—1118 567.—Ice Cooling Appliance Corp., 410 W. Wall St., Morris, Illinois.
52-795 B Refrigerator.—14 ea.—54,495.—Ed Friedrich, Inc., 1117 East Commerce, San Antonio, Texas.
52-795 B Refrigerator.—26 ea.—55,026.—Ed Friedrich, Inc., 1117 East Commerce, San Antonio, Texas.
52-795 B Refrigerator.—32 ea.—52,980.—Ed Friedrich, Inc., 1117 East Commerce, San Antonio, Texas.
General Services Administration Business Service Center, Region 3, 330 Hudson St., New York 13, New York
Fans, electric, rigid blades.—2015 ea.—54,632.—The Emerson Electric Mfg. Co., 3000 Florissant Ave., St. Louis 21, Missouri.

Perry Handles Remington Coolers In Nashville Area

AUBURN, N. Y.—The J. L. Perry Co., Inc., Nashville, Tenn., will distribute the Remington line of room air conditioners, E. A. Bonnevill, Remington general sales manager, announced recently. The territory covered by Perry will be the mid-Tennessee and south Kentucky area.

George B. Nelson, sales manager for the distributor will personally take charge of the sale of Remington units. J. L. Perry Co., Inc. is an independent distributor of the Westinghouse line of appliances. Clyde F. Forsmark is sales promotion manager for Perry.

Mattes Named Manager Of J. M. Obere, Inc.

DETROIT—Albert J. Mattes has been appointed general manager of J. M. Obere, Inc., Detroit parts wholesaler, announces J. M. Obere, head of the firm.

Mattes, a graduate in electrical engineering from the University of Pittsburgh, has been associated with Obere since 1945. For 10 years previously he had been with Universal Cooler, serving as national service manager from 1941 to 1945.

Roossin Will Represent Jordan In Western Area

LOS ANGELES—Jordan Refrigerator Co. has announced the appointment of Norman Roossin as factory sales representative in the states of California, Washington, Oregon, and Nevada.

Roossin maintains his headquarters at 742 S. Hill St., Los Angeles, and will handle the complete Jordan line of home and farm

freezers, reach-in refrigerators, beverage coolers, frozen food and ice cream merchandising cabinets.

Roossin comes to Jordan with many years of varied experience in the manufacture and sale of commercial refrigeration, food handling, and fountain equipment.

NEW PRODUCTS?

Turn to "What's New" Page for useful information on new products. Use Key No. for fastest service.

Quinn Represents Bush, Heat-X-Changer In West

LOS ANGELES—The Bush Mfg. Co. and the Heat-X-Changer Co. have announced the opening of new sales and engineering offices and a new warehouse at 1490 Calzona St., Los Angeles, with Harry L. Quinn as west coast district manager.



Harry L. Quinn

The new sales and distribution center, located within easy access of downtown Los Angeles, has both a railroad siding and a truck dock capable of handling two trucks. It will serve all of California and surrounding states.

The Bush and Heat-X organizations have also established commercial warehouse facilities in Seattle to serve the northwest area, and plan to add representatives there and in San Francisco.

Beginning in 1925, Quinn spent more than 15 years with the Frigidaire Sales Corp., first in the selling of commercial refrigeration equipment, later in the air conditioning phase of their operation. In the latter field he pioneered many of the earlier air conditioning installations, becoming in 1934 sales manager of the air conditioning division of Frigidaire Sales Corp. in California.

In 1941, Quinn accepted a position in the insulation division of the Pacific Lumber Co. and was responsible for the introduction of "Palco Wool" into the refrigeration picture on the east coast. During this time he served as a director of manufacturers and suppliers of the Frozen Food Locker Association.

During 1947 and 1948 he was associated with Drayer-Hanson, Inc. as sales manager of the eastern division. Joining the Recold organization in 1945 as sales manager of the air conditioning division, Quinn shortly thereafter was appointed director of sales for all their products except those in the oil and gas division.

The addition of the Los Angeles branch by Bush and Heat-X brings to 21 their number of sales and engineering offices throughout the country.

CLASSIFIED ADVERTISING

RATES for "Positions Wanted" \$5.00 per insertion. Limit 50 words. 10¢ per word over 50.

RATES for all other classifications \$7.50 per insertion. Limit 50 words. 15¢ per word over 50.

ADVERTISEMENTS set in usual classified style. Box addresses count as five words, other addresses by actual word count. Please send payment with order.

POSITIONS WANTED

AIR CONDITIONING commercial refrigeration supervisor with 25 years' practical experience in the installation and service of commercial, industrial refrigeration & air conditioning. Past 4 years South America with major oil company. Speak Spanish & German. 48 years old, married. Will locate anywhere. Interested permanent position future. BOX 2938, Air Conditioning & Refrigeration News.

GENERAL SALES manager—Experienced all phases air conditioning, refrigeration, heating, appliances—wholesale and retail—desires position. At present with one of largest Airstrip distributor-contractors in Midwest. Age 34, married, family. University graduate. Sales, engineering, purchasing, and accounting background. Desires to locate in Florida or Southwest in position that pays well, requires talent, with manufacturer or distributor. Sales or otherwise. Available for interview after March 15. BOX 2994, Air Conditioning & Refrigeration News.

POSITIONS AVAILABLE

WONDERFUL OPPORTUNITY for men to sell revolutionary new type of refrigerant dehydrator that is rated in water removing capacity. Choice territories available for those calling on refrigeration supply jobbers, in various sections. This is not just another line of driers, but a proven item in the field, that is excelled by no other. Write, BERNARD CORPORATION, P.O. Box 158, Richmond Hill 18, N. Y.

REFRIGERATION SERVICEMEN wanted. Experienced low temperature installation preferred, with knowledge of refrigeration and air conditioning. Be able to evaluate with help, cost of maintenance contracts and sell old and new customers. Must be worker and strong closer. Salary and car expenses. Call, write in confidence ELLIOTT-LEWIS CORPORATION, 1810 Mt. Ephraim Avenue, Camden 4, New Jersey. Emerson 5-1478.

SALESMAN—THAT is aggressive in making contacts. Basic knowledge of refrigeration and air conditioning. Be able to evaluate with help, cost of maintenance contracts and sell old and new customers. Must be worker and strong closer. Salary and car expenses. Call, write in confidence ELLIOTT-LEWIS CORPORATION, 1810 Mt. Ephraim Avenue, Camden 4, New Jersey. Emerson 5-1478.

SALES ENGINEER—One of the oldest firms in southeast Florida, Miami area—distributor for leading air conditioning manufacturer. Has opening for experienced and aggressive sales engineer. Excellent opportunity for right man. State experience. Write BOX 2914, Air Conditioning & Refrigeration News.

SALES ENGINEERS—Experienced in air conditioning and refrigeration—for Westinghouse Electric Corporation. Air Conditioning Division, sales offices in Midwest. Reply stating full qualifications, experience and salary to BOX 2936, Air Conditioning & Refrigeration News.

MANUFACTURERS REPRESENTATIVE wanted for a national concern manufacturing a complete line of commercial refrigerators to call on dealers, distributors and food chains. Have two openings available: one for the Pacific Northwest, including the State of California; and another for Western Pennsylvania. Western New York and Ohio. In writing, please furnish full background and experience. Applicant with allied line highly desirable. BOX 3029, Air Conditioning & Refrigeration News.

SALES ENGINEER in Chicago. Air conditioning and heating. Must be able to estimate and layout complete systems. Capable man will have no trouble earning in excess of \$10,000 per year. Write BOX 2932, Air Conditioning & Refrigeration News.

EQUIPMENT WANTED

WE ARE interested in purchasing a 6 ton air conditioning unit in good condition. BOX 2931, Air Conditioning & Refrigeration News.

EQUIPMENT FOR SALE

FOR SALE—80 ton cooling equipment as follows: with magnetic starters and automatic controls; 2 Frick 4 cylinder Freon Compressors 4 1/2 x 4 1/2 Model F.W. 440; 2 40 H.P.—238 volt—3 phase—60 cycle 1750 R.P.M. motors; 5 Aero fan coils, 4 pipes deep, 18 pipes high 31" x 26" 1 80 ton Buffalo fan 36" x 42" delivery 20,000 C.F.M.; 2 new American coils model 2000. BOVAL REALTY CO., 315 38th Street, Union City, New Jersey.

WHILE THEY last—Refrigerators, all makes, some as low as \$40; 1/2 h.p. hermetic units, \$47.00; capillary tubes for all sealed units, \$1.25. FERNDALE REFRIGERATION SUPPLY, 306 Flowerdale Street, Ferndale 26, Michigan.

52 BUY standard brand 1/2-HP open type or sealed type complete units. Other sizes up to 3-HP. Write for complete listings on units and parts, including Kilson overload relays @ 15¢. MANN REFRIGERATION SUPPLY CO., 440 Lafayette Street, New York 3, N. Y.

FOR SALE—brand new 1/2 H.P. hermetic compressors. Model 8-85 -8 1/4" high. Complete with relay and overload \$44.50. Send for your list on driers, valves, belts, pressure controls, fittings, relays. Supplies and parts at great savings. Sold on money back guarantee. WALTER W. STARR, 2888 Lincoln Ave., Chicago 12, Illinois.

FOR IMMEDIATE sale: 1-60 HP G.E. Freon Compressor, motor, pulleys, belts, base, magnetic starter, protectors & switches. 1-40 HP same as above. 1-condenser, 4-blower coils. Valves, copper pipe, controls and misc. equipment for close hook-up. BOX 2980, Air Conditioning & Refrigeration News.

BARGAINS: WEBER utility stand, refrigerated storage base section, back bar base section \$120 super 80 boiler, 3000 Taco water boiler, Asmott Dryer-Hanson and York chillers, Raytheon F 904 precipitators, Dew Crip island display, Revelation double station water cooler, TUCSON MACHINE & ENGINEERING CO., Tucson, Arizona.

BUSINESS OPPORTUNITIES

ESTABLISHED BUSINESS for sale. Distributor of nationally known food store equipment, owing to other time-consuming interests, wishes to dispose of lucrative business located in Southern Jersey. Present average yearly net profit, based on part-time activities, \$25,000. Can easily be doubled by devoting more time, adding new items and expanding territory. Investigate this unusual opportunity to take over a "going" business by writing BOX 2917, Air Conditioning & Refrigeration News.

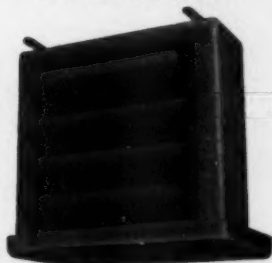
WILL SELL commercial refrigeration business or will sell interest, with privilege of buying, to responsible party having executive ability. Old firm, good franchises, highly profitable. Exceptionally good opportunity. Owner retiring. BOX 2918, Air Conditioning & Refrigeration News.

MISCELLANEOUS

"SEALED UNIT Rebuilding-Basic Tools & Methods" now in its third and final printing. This course of trade secrets gives complete information on equipping a shop to handle this work. Information found nowhere else. \$12.50 while supply lasts or write for details. H. CUSTER, Box 98, Center Line, Michigan.

NORGE SEALED units remanufactured or exchanged. Immediate delivery from stock. 1 year warranty. Write for prices and shipping instructions. Genuine Norge terminals for Norge sealed units. Complete set of three, \$115 plus postage. MODERN REFRIGERATION CO., INC., 12541 E. McNichols Road, Detroit 8.

LOOK to LARKIN for Good Looks



LARKIN HUMI-TEMP UNIT

For clean, smart lines, satin-smooth finish, color and overall good looks—Larkin leads. Behind this beauty is the quality and performance that keeps Larkin ahead.

Manufacturers of the original Cross-Flu Coil — Humi-Temp Units — Evaporative and Air Cooled Condensers — Air Conditioning Units and Coils — Direct Expansion Water Coolers — Steel Vacuum Plate Coils — Heat Exchangers.

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There's always one that's better...and in controls it's Ranco!



Get your teeth into this: Ranco controls are available for more than 4,000 replacement installations—refrigerators, milk coolers, water coolers, commercial units—almost every type of job you'll ever tackle. That, and because of their high quality and dependable accuracy, is the reason why more Ranco controls are in use than any other kind.

Ranco Inc.

COLUMBUS 1, OHIO

WORLD'S LARGEST MANUFACTURERS OF REFRIGERATION CONTROLS



Coleman Systems --

(Concluded from Page 1, Column 3) cost, states Sheldon Coleman, president.

Government-imposed restrictions on the use of materials will limit 1952 output of the cooling unit to 500, most of which will be channeled into areas having high summer temperatures and relatively high humidity conditions.

"Limited production will enable us to work closely with Coleman distributors and their dealers in a program designed to solve any engineering problems which may be encountered," Coleman added.

The cooling unit fits on top of the Blend-Air furnace which, at the turn of a damper, can be switched from winter heating and ventilation of the home to summer air conditioning.

Blend-Air as a heating and ventilating system was introduced in 1949 and more than 50,000 installations have been made throughout the country, it is stated.

The cooling unit makes use of the same distributing system as is used in winter heating—the 3½-in. ducts which are small enough to fit between the walls of new or old homes and the unique blenders which take the place of the registers of the conventional forced warm air system.

In the heating system, these blenders serve as mixing chambers, taking the heated air from the furnace, mixing it with room air drawn into each blender and then circulating it back into the room in a steady flow.

This automatic circulation and recirculation set up by the system's operation functions the same way when the cooling unit is being used.

Carrier Names La. Dealer

NATCHITOCHES, La. — Dowden Roofing & Metal Works, 1225 Texas St., has been appointed dealer for Carrier air conditioning products in Natchitoches, Red River, and Winn parishes (counties).



**The Greatest
VALUE in
FOOD FREEZERS**

**THE FAMILY'S
PREFERENCE EVERYWHERE**



Revco, INC. • DEERFIELD, MICH.

New \$1,500,000 Cold Storage Warehouse To Be Built In Memphis

MEMPHIS, Tenn.—Mid-South Refrigerated Warehouse Co. has announced plans to let general contracts for its new \$1,500,000 cold storage warehouse to be constructed at East Parkway South and Spottswood here.

William W. Goodman is president of the company and T. E. McCrary is vice president and general manager. Both hold the same positions with the Memphis Cold Storage Warehouse Co.

The new plant, which will be the largest in the area and one of the most modern in the nation, is being built to meet naval and military needs of the expanding defense effort.

More than 100,000 sq. ft. of space on one floor of the new plant at truck and railroad car level will be devoted to cold storage, most of which will be refrigerated to -20° F.

Refrigeration will be supplied by a liquid ammonia recirculation system. The several compressors will be of the multi-cylinder reciprocating type with additional machine capacity as standby. Individual rooms will have forced-air blowers with distributing ductwork.

Each of six freezing units will have capacity to fast freeze 30,000 to 100,000 lbs. of food at a time. Total freeze storage capacity will be 1,000,000 cu. ft.

Besides the first floor, there will be a 15,000-sq. ft. area on the second floor. This two-story portion will be conservative, yet modern, designed, faced with architectural monolithic concrete and steel windows.

A number of layers of natural cork will provide wall and roof insulation. The floor will be of the "sandwich" type construction. The wearing surface will be of reinforced concrete with layers of cork just below, with a subfloor of reinforced concrete acting as structural support. A system of underfloor ducting will be installed to prevent frost penetration into the ground.

The plant was designed by A. Epstein & Sons, Inc., Chicago engineering specialist in refrigerated and industrial construction.

Fair Trade Bill --

(Concluded from Page 1, Column 4) of the state laws.

The McGuire bill, approved by the House Interstate Commerce subcommittee, gives specific approval to the non-signer clause. It also approves fair trade pricing for mail order sales where the retailer is in one state and the purchaser in another.

The McGuire bill would provide that states be authorized, by act of Congress, "to adopt policies which authorize contracts and agreements prescribing minimum or stipulated prices for resale of commodities and to extend the minimum or stipulated prices prescribed by such contracts and agreements to persons who are not parties thereto."

Before the McGuire bill becomes law it must be passed by both houses of Congress and get the signature of the President.

A House Judiciary subcommittee has also been holding hearings on fair trade laws, where most of the witnesses have been hostile, and it may turn in a report recommending that no action be taken to promote any new legislation restoring strength to the state laws.

The Federal Trade Commission, which opposes any action to strengthen fair trade laws, may get together with the Department of Justice anti-trust division to offer instead a bill which would amend the Robinson-Patman Act, to strengthen its provision against discriminatory price cutting, but only where it can be shown that it tends to eliminate competition.

RACCA Seeks Recognition --

(Concluded from Page 1, Column 4) stating its case. This presentation would then be published in the Bulletin of American Architects, a publication edited and published by Taylor for AIA members.

In his talk with Walker, Edelstein pointed out that refrigeration and air conditioning contractors are now able to "stand on their own feet" financially and technically.

The RACCA official argued that such contractors can do a complete job "on their own," not having to subcontract under a heating, plumbing, or steamfitting contractor. In many instances, he stated, it is possible for the refrigeration and air conditioning contractor to act as a general contractor.

Walker acknowledged that these facts should be brought to the attention of the general body of architects by the proper publication and officers of the AIA, according to Edelstein.

New Hotel To Be Cooled

MIAMI SPRINGS, Fla.—A state hotel permit has been issued a \$150,000 hotel here which will have air conditioning, according to officials of Miami Travelers, Inc., owner. Preliminary plans call for 41 hotel rooms and four apartment units with one bedroom and one bath.

To Cool New Grant Store

GREENVILLE, S. C.—To be air conditioned, a building is being constructed on West McBee Ave. for W. T. Grant Co., at a cost of approximately \$1,000,000.



QUICKFREEZER with 19-cu. ft. capacity is being introduced by Victor Products Corp. The freezer features blue and gold plastic grille and separate freezing compartment.

Urge City Market Meat Be Sold from Cooled Cases

HAMILTON, Ont., Can.—A petition from 30 butchers in connection with the sale of fresh meat at Hamilton's city market was placed before a meeting of Property and License Committee.

The petition, suggesting amendment of the laws relating to the sale of fresh meat in the market, asked that the minimum quantity that can be exposed be made one eighth of a carcass instead of one sixteenth and urged that all fresh meat should be placed in refrigerated display cases.

Because of the issues involved, the members decided that a special subcommittee should go into the question.

Victor Freezers --

(Concluded from Page 1, Column 4) counterbalanced lid with interior automatic light; and built-in lock with two keys are some of the design features included in the new Victor line.

Convenience features include interior with five containers for left-over foods in a specially designed basket; removable deep storage baskets; ice cube tray with shallow utility basket; adjustable dividers. An alarm system is provided with every cabinet.

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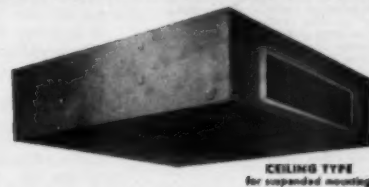
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